THREE ESSAYS ON THE CORPORATE SOCIAL RESPONSIBILITY AND FIRM OUTCOMES

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DECLARATION

This thesis is my original work and it has not been submitted to any universities for any purposes.
I hereby declare that this paper is used for the purpose of finishing the author's degree of doctor.
I take sole responsibility for this paper.

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TABLE OF CONTENTS

SUMMARY

This thesis consists of three separate papers that focus on how socially responsible behavior, mainly corporate social responsibility (CSR), affects firm-level strategies and outcomes. CSR is the firms' socially responsible behavior that is required beyond the law and has become an increasingly important issue over the past several decades. Different from the traditional profit-maximization viewpoint, stakeholders begin to emphasize corporate social activities and regard those firms with non-financial information as more transparent and legitimate. As such, an increasing number of firms engage in CSR to gain sociopolitical legitimacy, which helps them further elicit critical resources and supports from stakeholders. Acknowledging that social activities do have important implications for firms' outcomes, it is often to witness firms are not able to seize benefits and advantages through engaging such social activities, sometimes even though they devote into substantial efforts. We believe that it is imperative to investigate the ways how firms engage in CSR and how firms develop their experience and capabilities and make better use of these resources to do CSR. Having this general direction in mind and based on previous literature on CSR, we investigate the relationship between philanthropy, an essential aspect of CSR, and financial performance within different life-cycle stages; unpack the mechanism between CSR and corporate investment, and uncover how CSR activities at home influence their outward foreign direct investment location choice portfolio.

First, we investigate how a firm's corporate philanthropy CP–CFP relationship changes as firms move through their life-cycle stages from a capability-development perspective. The controversial research results on the relationship between CP–CFP have led to the argument that it is not the amount of CP that affects performance, but rather how firms utilize their resources to engage in CP. Given that firms' capability

of utilizing, allocating, and managing the resources firms invest in CP will determine the benefits that the firm can gain from CP, we, therefore, base on capability-life-cycle perspective and examine how a firm's philanthropic capability evolves throughout the firm's different life-cycle stages. We take a dynamic perspective and investigate the time-varying effects of CP from the capability-life-cycle perspective and find that the CP–CFP relationship is not monotonically linear throughout the firm's life cycle, but changes from negative to positive from development to mature life-cycle stage. In other words, the sign of CP–CFP relationship changes from negative to positive as firms move through life-cycle stages. We provide a novel way to reconcile previous conflicting findings on the CP–CFP relationship.

Second, we explain the benefits of CSR in helping a firm increase its investment from an integrated information-asymmetry and stakeholder perspective. Different from previous literature that takes internal aspects such as financial capability as its starting point to investigate firm investment, we argue that the external social-acceptance perspective is also crucial in determining a firm's investment behavior. Firms' CSR helps them build sound image and send a signal to stakeholders that they are good citizens, which helps promote and manage a trustful relationship with stakeholders. Such a healthy relationship will, in turn, increase the likelihood of obtaining investment opportunities from stakeholders, a prerequisite to increase investment expenditure. Therefore, we argue that a firm's CSR should be another channel to improve firms' investment expenditure. Building on the integrated information-asymmetry and stakeholder perspective, we broaden the corporate investment literature by showing that how firms increase their investment expenditure through CSR.

Third, we link the firm's CSR activities at home with foreign-market location choices through a learning perspective. We specifically focus on the non-market barriers at host counties and examine how

CSR activities, which is an experience-accumulation process, help emerging market state-owned enterprises (EM-SOE) offset the legitimacy liabilities of investing abroad. Drawing on the springboard and learning perspective, we first argue that EM-MNEs have strong motivation to enter host countries with advanced know-how knowledge, but they may not likely be accepted by host-country stakeholders with stringent social and environmental requirements. We then argue that through engaging in CSR activities at home, firms can develop and accumulate the experience of doing CSR, which are essential to timely identify and adjust their behavior accord to the expectations of the stakeholders in the host market to facilitate them entering the host country with high CSR requirements. Instead of looking at the firms' non-market strategy after they enter the host country, we look at how firms develop CSR experience and overcome legitimacy challenges before they enter the foreign market.

This thesis has important implications for firms in both developed institutional environments and developing institutional contexts. First, chapter one of this thesis considers whether the capability of using resources will help firms generate benefits from a dynamic perspective. As firms in any economies need to deal with their ability to utilize resources to improve their competitive advantage, the life-cycle perspective provides us with a good viewpoint through which we understand this process. Therefore, we believe that this chapter can help people in the general institutional environment make relevant decisions from a developmental and dynamic perspective. The second chapter looks at how a firm's CSR improves its social acceptance, which in turn promotes investment targets' acceptance and their probability of getting more investment opportunities from them from an integrated information-asymmetry and stakeholder perspective. The issue of investment efficiency is prevailing in both developing and developed economies. How to improve the investment efficiency from a social acceptance perspective is not only an imperative for

developed but also for developing countries. Different from previous literature in firm investment literature, we change the traditionally believed passive perspective from investment target and take an active standpoint from investment target to demonstrate how the investment target acceptance will improve the firm's investment efficiency. The third chapter looks at how CSR capability developed in the home country helps firms enter institutional environments with higher social requirements. Because firms in emerging economies always face institutional voids and the lack of resources and experience in making the oversea investment, engagement in CSR in the home country especially in developing home countries will thus help them improve such experience and therefore overcome international stakeholders' negative evaluation which is known as the liability of origin and liability of foreignness. Therefore, this chapter has more implications for firms in emerging economies.

The thesis research sample is Chinese publicly listed firms in both the Shanghai and Shenzhen stock market. According to the timeline of my PhD thesis, I first focused on the period between 2008 and 2015 to finish my first chapter and checked philanthropy–financial performance relationship. For the second chapter, I used corporate social responsibility data from the RKS database from 2009 to 2015 because CSR data in the RKS database starts from 2009 and ends in 2015. I used the same period from 2009 to 2015 in my third chapter.

Since China's reform and open-door policy, a dramatic transition from state-controlled to a market-based economy has been taking place in China. Despite the high-speed economic growth, the transition to a market-based economy accompanies with firms' unethical behavior and social irresponsibility. Since 2006, when China's 11th Five–Year Plan began to issue CSR reporting guidelines for large firms in order to pursue a "scientific development and harmonious society," Chinese government put heavy emphasis on the social

issues such as environment protection, reduction emission, and energy-saving, all of which aim at transferring to a greener and sustainable GDP growth. Therefore, how firms engage in CSR activities to promote social benefits becomes a relevant issue in the Chinese context.

LIST OF TABLES, FIGURES, AND APPENDIXES

CHAPTER1: Untangling the Relationship between Corporate Philanthropy and Financial Performance from the Capability-life-cycle Perspective

ABSTRACT

This study investigates how companies' philanthropic activities affect corporate financial performance (CFP) at different life stages of the firm. Considering that firms' capabilities differ significantly in different life stages, particularly from development to maturity, we explore how the capability of engaging in corporate philanthropy (CP) alters in these life stages, and how it affects financial performance. Further, accepting that slack resources reflect firms' capabilities for resource utilization, we also examine how absorbed and unabsorbed slack resources affect the underlying relationship between CP and CFP. Using panel threshold modeling on a sample of Chinese listed firms from 2008 to 2015, we indeed uncover significant variations in the relationship between CP and CFP at different life-cycle stages—the relationship changes from negative in the development stage to positive in the stage of maturity. We also find significant positive (negative) moderating effects of absorbed slack on the philanthropy–financial performance relationship in the development (later mature) life-cycle stages, and positive moderating effects of unabsorbed slack on this relationship in the later mature life-cycle stage. Our results are robust under different models and different measurements of firm financial performance after controlling for endogeneity.

Keywords: philanthropy, financial performance, life cycle, slack resources, China

INTRODUCTION

Corporate philanthropic behavior is an important component of corporate social responsibility (CSR) (Carroll 1979, 1991; Wang, Choi, and Li 2008). Corporate philanthropy (CP) refers to the firm's discretionary monetary and non-monetary support aimed at improving social welfare, particularly after natural disasters (Godfrey 2005). Interestingly, the relationship between CP and corporate financial performance (CFP) remains debatable (Orlitzky et al. 2003; Wang and Qian 2011; Masulis and Reza 2014).

Neoclassical economists have long argued that companies should focus only on maximizing shareholder value. According to this view, CP is an unnecessary extra cost (Friedman 1970) that has mainly negative performance implications (Aggarwal et al. 2012) and an unclear cost-benefit outcome (Godfrey 2005; Margolis and Walsh 2003; Orlitzky et al. 2003; Wang and Choi 2013), and should, therefore, be avoided. However, nowadays, there is a growing acceptance that CFP can benefit from a firm's engagement in philanthropic behavior. Firms adopting a more philanthropic agenda are known to gain a more positive reputation (Brammer and Pavelin 2006), attract higher-quality employees, and accumulate overall higher moral capital (Godfrey 2005; Godfrey et al. 2009). Thus, CP is essential for maintaining good stakeholder relationships (Berman et al. 1999; Jones 1995) and achieving the necessary legitimacy within a market to allow the business to continue to grow (Oliver 1997).

From this perspective, if firms can strategically use their resources in doing CP with a rare, immobile and inimitable manner, they will thus develop CP as a process that provides firms with a competitive advantage (Brammer and Millington, 2008; Cantrell, Kyriazis, and Noble, 2015; Porter and Kramer 2002). Given that CP can help firms cultivate a good level of employee commitment (Dutton et al. 1994), customer attachment (Brown and Dacin 1997), and social-political legitimacy (Wang and Qian 2011), simply focusing on the relationship

between the *amount* of philanthropy and firm financial performance may not fully capture the benefits derived from different engagement strategies (capabilities) for philanthropic behavior (Tang et al. 2012). Therefore, we track firms' capability at different life-cycle stages to utilize resources to engage CP and argue that this capability is of paramount importance in firms achieving the benefits of CP, and will eventually improve their financial performance (Cantrell et al. 2015; Kim et al. 2018; Wang and Choi 2013).

We, therefore, focus on the firm capability to engage in CP and how it is projected at different stages in a firm's life cycle. We argue that the capability to engage in CP differs at different stages in the life cycle of a firm, specifically from the development stage to the stage of maturity. During the growth stage, firms are expected to allocate their resources in critical operational areas such as advertising and research and development (R&D), which are paramount for firm expansion. Because of this need, the amount of resources available for CP are limited (Elsayed and Paton 2009), as is the firm's capability to engage in CP. In contrast, the more a firm moves toward maturity, the more its capacity to engage in socially responsible activities increases (Freeman 1984; Handelman and Arnold 1999; Suchman 1995), along with more experience in interacting with stakeholders encouraging the firm to seek out CP opportunities actively. Prior studies have suggested that a firm's capability and life-cycle experience determine how well a firm can perform philanthropic activities, and how much it can benefit from these activities (Brammer and Millington 2008; Cantrell, Kyriazis, and Noble, 2015; Elsayed and Paton 2009). However, very few studies have investigated the CP–CFP relationship in consideration of different firm life-cycle stages. We bridge this gap in the literature. By building on the capability-life-cycle perspective, we shed fresh light on the debate about the CP–CFP relationship. Further, given that the level of slack resources can represent a firm's capabilities to utilize resources, we frame the capability to utilize resources to engage in CP in each life-cycle stage through the moderating effect of slack resources and expect to find discreet effects of

such capability variance on the CP–CFP relationship at different stages in a firm's life cycle.

Using data on Chinese publicly listed enterprises from 2008 to 2015, we use panel threshold modeling (Hansen 1999) to identify life-cycle stages, and generalized estimating equation (GEE) modeling to test our hypotheses. A set of robustness checks, including two-stage least squares (2SLS) regression and propensity score matching (PSM), are also employed to confirm that our results are not spurious or driven by endogeneity. We also use a firm's earnings before interest, tax, depreciation and amortization scaled by the total asset (EBIDTA Ratio) as the alternative measures of financial performance (Paeleman & Vanacker, 2015) to avoid potential earnings management. Our paper offers three distinct contributions to the literature. First, we take a dynamic perspective and investigate the time-varying effects of CP from the capability-life-cycle perspective. Suggesting that the CP–CFP relationship is not monotonically linear throughout the firm's life cycle, we provide a novel way to reconcile previous conflicting findings on the CP–CFP relationship. Second, we offer a novel discourse on the moderating role of resource slack on the CP–CFP relationship at different stages in the firm's life cycle. Third, we offer a methodological contribution; that is, rather than dividing firms' life-cycle stages using an eight-year cut-off point (Paeleman and Vanacker 2015) or according to cash-flow levels (Cuypers et al. 2015; Dickinson 2011), approaches that have been heavily criticized for being restrictive and biased, we use a panel threshold model that aptly and objectively detects points of overall structural change according to model fit (Hansen 1999).

The remainder of the paper is structured as follows. We first review prior studies on the relationship between CP and CFP. We continue our discussion with a discussion of the key theoretical underpinnings that formed the basis for our hypotheses. We then present the methodological considerations, along with the analysis of the data used to test the hypotheses. A description of the study findings and their interpretation follow, along with a

discussion of our contribution to theory and practice.

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Philanthropy and financial performance

CP refers to a charitable "unconditional transfer of cash or other assets to an entity or a settlement or cancellation of its liabilities in a voluntary nonreciprocal transfer by another entity acting other than as an owner" (Statement of Financial Accounting Standards No. 116, FAS116 Status Page, Accounting for Contributions Received and Contributions Made, 1993). Being purely voluntarily, CP is considered a firm's most discretionary means of social responsiveness (Carroll 1979, 1991; Godfrey 2005; Hemingway and Maclagan 2004). With the current increasing expectations for firms to assume social and economic responsibility (Paine 2003), it is not surprising that discretionary charitable behaviors are associated with the following effects: (a) enhancing a firm's inimitable resources such as reputation, goodwill, and overall moral capital; (b) strengthening stakeholder acceptance within the market (Doh et al. 2010); (c) improving a firm's overall social and political legitimacy (Wang and Qian 2011). Given the above benefits of CP, positive implications of CP for CFP should be expected (Aguinis and Glavas, 2012). Unfortunately, the empirical results from research remain largely controversial, with only several studies providing clear support for a positive association between CP and CFP (Cuypers et al. 2015; Orlitzky et al. 2003; Wang and Qian 2011; Wokutch and Spencer 1987), while others have found either non-significant (Griffin and Mahon 1997; Seifert et al. 2004) or even a negative result for this relationship (Aggarwal et al. 2012; Aupperle et al. 1985; Friedman 1970; Masulis and Reza 2014).

The controversial research results have led to the argument that it is not the *amount* of CP that affects performance, but rather *how* firms utilize their resources to engage in CP (Tang et al. 2012; Wang and Choi

2013). Indeed, recent research attention has been increasingly drawn to the capability of a firm to effectively utilize its engagement in CP to generate goodwill and a positive reputation among all its stakeholders (Cantrell, Kyriazis, and Noble, 2015). Although previous studies have added new insights such as the effects of stakeholders' perception (Cuypers et al. 2015) and firm's competitive action (Kim, Kim, and Qian, 2018) on firm's CFP and acknowledged that philanthropic firm behavior can affect a firm's financial performance (Bhattacharya et al. 2009; Choi and Wang 2009; Orlitzky et al. 2003; Wang and Qian 2011), a great deal of research interest has focused on stakeholder and resource management in relation to CP. Consequently, how a firm can utilize its overall resources to deliver and create benefits for stakeholders through its engagement in CP has become a central question in the debate on the CP–CFP relationship (Bhattacharya et al. 2009; Cuypers et al. 2015; Freeman 1984; Jones 1995).

Thus, we argue that firms' capability of utilizing, allocating, and managing the resources firms invest in CP will determine the benefits that the firm can gain from CP (Sirmon and Hitt 2003; Sirmon et al. 2007). However, recognizing that the needs of stakeholders evolve in line with the dynamics of the market (Jawahar and Mclaughlin 2001), we also expect that a firm's philanthropic capability will also evolve dynamically and strategically in line with stakeholders' requirements and expectations. To account for this dynamic evolution, we employ the capability-life-cycle perspective to examine how a firm's philanthropic capability evolves throughout the firm's different life-cycle stages (Helfat and Peteraf 2003).

Capability life cycle and the firm CP–CFP relationship

Capability-life-cycle perspective

The life-cycle perspective determines not only how capably a firm will conduct its overall activities, but also how much the firm can benefit from its activities in a sustainable manner (Brammer and Millington 2008;

Wang et al. 2016). The capability-life-cycle literature focuses on the evolutionary characteristics of organizational capabilities over different life-cycle stages (Helfat and Peteraf 2003). As Helfat and Peteraf (2003) advocate, it is not possible to understand fully how to achieve sustainable competitive advantage unless we investigate how firms' resources and capabilities evolve.

The capability-life-cycle perspective defines three main stages in the life cycle of a firm: the founding stage, the development stage, and the maturity stage (Helfat and Peteraf 2003). Each firm begins with a new-to-the-world idea, typically exhibiting limited relevant experience and knowledge on resource attainment and capability development because the level of experience and knowledge predominately depends on that of the founders (Helfat and Peteraf 2003). However, and given that a firm's experience is influenced by past experience and knowledge, as the company grows, new experience and knowledge are added at each stage (Cohen and Levinthal, 1990). This knowledge constitutes the firm's organizational memory (Moorman and Miner 1997), which is imperative to a firm's sustainable performance throughout its different life stages (Helfat and Peteraf 2003). Prior studies have revealed that organizational memory determines a firm's capability for resource orchestration and reconfiguration (Carnes et al. 2017; Miller and Friesen 1984; Sirmon et al. 2011), as well as a firm's concurrent learning capability (Bingham et al. 2015).

We closely examine how firms develop their philanthropic capabilities from development to maturity to gain a better understanding of how firms' CP–CFP relationship evolves throughout the firm's life cycle. Given the limited resources during the founding stage and the focus on firm survival at this stage, we expect that during the founding stage, the funding available for CP will be very limited because it goes beyond the firm's priorities at that stage and because CP engagement needs a significant amount of financial resources (Clarkson, Li, Richardson, and Vasvari, 2011; McWilliams and Siegel 2001), firms in the founding stage are less likely to have

philanthropic behavior; thus, given that our sample is Chinese listed companies, firms in our sample are in founding stage should be very limited. For consistency and convenience of explanation of our results, we combine this stage with the development stage in our discussion and analysis. Thus, we specifically examine the capability of engaging CP through the analysis of resource allocation and stakeholder legitimacy during the two distinct life-cycle stages of the development stage and the maturity stage. We display our theoretical model for this study in figure 1-1.

[Insert Figure 1-1 about here]

Resource Allocation during development and maturity stages

While during the development stage, the emphasis of the firm is placed on obtaining a healthy customer base and a systematic delivery process (Churchill and Lewis 1983), the maturity stage focuses on how to "exploit the company's accomplishments and expand or keep the company stable and profitable" (Churchill and Lewis 1983, p. 5). Firms in the development stage are expected to focus on their most profitable projects (Samuelson and Nordhaus 2010), giving priority to market-related strategies, such as expanding product lines (Barringer and Greening 1998; Bruderl and Schussler 1990; Miller and Friesen 1984) and/or improving levels of innovation (Govindarajan and Trimble 2005; John et al. 2003) that will support the firm's priorities for expansion. Thus, while for firms in the development stage, they tend to have slack that could be invested into non-market strategies such as CP (Campbell 2007; Jawahar and Mclaughlin 2001), it is not uncommon for firms in this stage to instead reinvest these slack resources into more demanding operational requirements to attempt to ensure further expansion (Scott and Bruce 1987). After all, continued expansion is typically associated with more enormous challenges in obtaining organizational legitimacy, overcoming liabilities of newness, and selecting and training new personnel, particularly when the firm is deciding to grow beyond its domestic or industrial borders

(Barringer and Greening 1998).

In contrast, during maturity, firms not only tend to present a stronger resource base but also a good breadth of experience in using resources to address social issues proactively (Jawahar and Mclaughlin 2001). Indeed, when a firm reaches maturity, it tends to exhibit good profitability with healthy cash flow (Wiklund et al. 2009), although not necessarily sufficient to distribute among its shareholders (Scott and Bruce 1987). Enjoying higher levels of financial and operational resources, companies at the maturity stage tend to concentrate on how to maintain efficiency and innovation momentum throughout their operations (Elsayed and Paton 2009; Gray and Ariss 1985; Helfat and Peteraf 2003). They, therefore, become more able to forecast the exact resource level required for their daily operations while reducing their reserves for unexpected emergencies (Hasan and Habib 2017). Overall, mature firms present with higher confidence in allocating resources to non-operational or non-market investment projects and therefore tend to invest in activities that will strengthen their reputation and legitimacy to support their sustainable growth, for example, engagement in philanthropic behavior.

Stakeholder management during the development and maturity stages

It has long been accepted by those life-cycle theorists that during different life-cycle stages, firms face different types of pressures, threats, and opportunities from different stakeholders in both their internal and external environments (Jawahar and Mclaughlin 2001). Thus, distinguishing the most beneficial targets at each stage of the life cycle and managing sustainable and fruitful relationships with those stakeholders becomes a key competence for firm success (Godfrey 2005).

In the development stage, an uninterrupted stream of resources is imperative for a firm's sustainable growth and survival. However, such resource intake cannot be attained without continuous support from key stakeholders including financial institutions, suppliers, trade associations, and loyal consumers (Garud et al. 2014;

Martens et al. 2007). Unfortunately for firms in the development stage, developing and maintaining these relationships is not easy and is often hampered by the firm's lack of market legitimacy at this stage. This is because market trust and legitimacy lead to "persistence because audiences are most likely to supply resources to organizations that appear desirable, proper, or appropriate" (Suchman 1995, p. 574). That is, while firms at their stage of development and growth require the support of the market the most, they are also the firms that find it the most difficult to convince the market to support them because of their limited track record of market successes (Aldrich and Fiol 1994). In fact, firms at this stage are typically faced with stakeholder scepticism and hostility (Aldrich and Fiol 1994; Garud et al. 2014), making it even more difficult for them to develop and follow through market expectations, particularly concerning plans that are about non-market activities (e.g., engagement in philanthropic activities).

Fortunately, while trust and legitimacy are never guaranteed for a firm (Aldrich and Fiol 1994; Lounsbury and Glynn 2001; Zimmerman and Zeitz 2002), they can both be gained with time. Thus, as firms survive their initial development stage, they tend to become more proficient in building stronger, long-lasting stakeholder relationships. Having already developed sound financial stability as well as having satisfied all immediate stakeholders' needs, mature firms find it a great deal easier to promote and follow through non-market activities, such as engagement in CP (Jawahar and Mclaughlin 2001). After all, the more firms engage in social activities, the more they develop a transparent environment around them (Dhaliwal et al. 2011), thus simultaneously invoking managerial ethical behavior (Kim, Park, and Wier, 2012) and improvement in internal governance (Harjoto and Jo, 2011). These developments can only reinforce firms' trust and reputation among stakeholders, which in turn lowers even further the firms' cost of capital and improve overall financial conditions (Dhaliwal et al. 2011; Flammer 2018).

Given the arguments presented here, we posit that the relationship between CP and CFP is not monotonic. On the contrary, this relationship varies according to the life cycle of a firm. During the development stage, the relationship between CP and CFP is generally negative because of a lack of resource availability and the ineptitude of firms to handle stakeholder relationships. In contrast, during the maturity stage, firms experience a heightened legitimacy that positively affects their relationship with stakeholders of all types, which has positive implications for their overall reputation and performance. Thus, we propose the following hypotheses:

Hypothesis 1: *During the development stage of a firm's life cycle, the relationship between CP and CFP is negative.*

Hypothesis 2: *As firms move into maturity, the relationship between CP and CFP becomes stronger and positive.*

Moderating effects of slack resources on CP–CFP relationship

Organizational slack is defined as the sum of excess absorbed and unabsorbed resources that a firm exhibits at any point in time (Voss, Sirdeshmukh, and Voss 2008). The unabsorbed slack resources are the excess resources that are not committed to any use and can be easily redeployed, for example, cash or short-term securities (Paeleman and Vanacker 2015; Voss et al. 2008). Absorbed slack resources are excess resources that are committed to a specific use, for example, the excess amount of resources invested in knowledge, skills, and capabilities in organizations (Mishina, Pollock, and Porac 2004; Voss et al. 2008). Although slack resources remain idle and do not actively contribute to daily operations, these resources provide the firm with a cushion against unexpected changes in the market (Bourgeois 1981) and allow the firm to grasp new market opportunities quickly when presented (Pitelis 2007; Poynter and White 1984).

Nevertheless, the presence of excess resources can also indicate a lack of efficiency in resource utilization, which can be detrimental to a firm's sustainability and survival (Paeleman and Vanacker 2015). It has therefore been argued that slack resources are beneficial for growth if and only if firms can effectively transform slack

resources into productive economic benefits when required (Debruyne, Frambach, and Moenaert 2010; Mosakowski 2002). Acknowledging that a firm's ability to effectively utilize excess resources can be altered with experience and knowledge, it is natural to expect that the capability of using slack resources to garner benefits from existing projects, and then positively affect performance could also change dramatically during a firm's lifetime (Paeleman and Vanacker 2015; Wang et al. 2016).

Given that the level of slack resources can represent a firm's capability to utilize resources and in consideration of the differences between absorbed and unabsorbed slack resources, we argue here that different types of slack resources will have different effects on the CP–CFP relationship during a firm's life cycle.

Absorbed slack resources refer to all excess resources already embedded in the firm, that is, the excess human and operational costs that represent a firm's operational capacity (Miller and Leiblein 1996; Bradley et al. 2011). Thus, it can be argued that the existence of absorbed slack resources can help a firm develop its CP competences. Unfortunately, absorbed slack resources, representing the least accessible resources (Mishina et al. 2004), can be recovered only through an extensive organizational redesign (Cheng and Kenser 1977). Such redesign entails changes to established routines and organizational processes, which could considerably disrupt a firm's internal efficiency (Love and Nohria 2005). Accepting that during their earlier years, firms tend to suffer from inexperience, any attempts to positively transform absorbed slack resources are not only deemed unsuccessful but can also easily lead to waste. Indeed, absorbed slack resources have often been blamed for adding to "organizational fat" (Love and Nohria 2005) and increasing bureaucratic costs (D'Aveni and Ravenscraft 1994), resulting in an overall decrease of the overall efficiency of the organization (Wiseman and Bromiley 1996).

Meanwhile, during maturity, at which stage firms enjoy the benefits of experience and age, they also suffer from a lack of novelty and innovation (Koh et al. 2015). To cope with this, firms in the maturity stage tend to focus

on scale economies so they can maintain large market shares and their competitive advantage over their newer counterparts. Thus, while mature firms may be more capable of exploiting these "sticky" resources to develop new capabilities (Miller and Friesen 1983, 1984), including CP competences, they may be disinclined to do so to avoid turning their absorbed slack resources into waste.

Based on the above arguments, we posit that no matter in which life-cycle stage, absorbed slack resources negatively moderates the effect of CP on CFP. Thus, we propose the following hypothesis:

Hypothesis 3: *Absorbed slack resources negatively moderate the negative CP–CFP relationship in the development life-cycle stage and negatively moderate the positive CP-CFP relationship in the mature life-cycle stage.*

The existence of unabsorbed slack resources can be considered to demonstrate the firm's ability to generate a healthy cash flow, which is a result of sound operating performance. During the development stage, firms tend to give priority to critical issues that guarantee their survival and future sustainability; hence, all available accessible resources are devoted to developing the firm's unique operational competences. During this stage, production, advertising, and marketing expenses are increased to enable the firm to develop a stable dominance within its market (Miller and Friesen 1983, 1984). Consequently, during the development stage, firms are expected to be able to fully exploit their resources, thus reducing any idle unabsorbed slack resources within the organization. Acknowledging that the development stage is heavily resource-demanding (Miller and Friesen 1984), the presence of any unabsorbed slack resources may signal a low level of efficiency in resource utilization. Thus, we propose the following hypothesis:

Hypothesis 4a: *Unabsorbed slack resources negatively moderate the CP–CFP relationship in the development stage.*

In contrast to the development stage, during maturity, firms have overcome growth hurdles, and are enjoying both steady cash flow and market share (Dodge and Robbins 1992; Miller and Friesen 1984), as well as higher levels of access to external financing (Easley and O'Hara 2004; Hasan et al. 2015); thus, such firms are expected to have higher levels of unabsorbed slack resources (DeAngelo et al. 2006). This abundance of resources coupled with their increased levels of legitimacy and stakeholder trust allow mature firms to successfully reconfigure, reintegrate, and rebuild their resources and capabilities into new competencies such as CP engagement (Carnes et al. 2017). The same level of engagement in CP for a mature firm will likely generate more significant benefits than it will for a firm in the development stage because of the increased capabilities and competences of mature firms to engage in socially responsible behavior and their higher level of social credence. We thus expect that during the maturity life-cycle stage, the existence of abundant unabsorbed slack resources will positively moderate the CP–CFP relationship, thus reinforcing the positive financial outcomes of engaging in CP.

Hypothesis 4b: *Unabsorbed slack resources positively moderate the CP–CFP relationship during maturity.*

DATA AND METHODS

Data and sample

Chinese listed companies from 2008 to 2015 are used to construct our panel dataset. The data are drawn from the China Stock Market & Accounting Research (CSMAR) database. Information from the China Statistical Yearbook and WIND database are further employed to obtain information on the regional development and firm characteristics of our sample. The main database (CSMAR) provides firm-level donation information and key accounting data for all firms in our sample. While our sample focuses on firms that engage in charitable activities, to avoid sampling biases, we employ the Heckman two-stage model (Heckman 1979), as suggested in previous literature (Du et al. 2019; Wang, Choi, and Li 2008; Wang and Qian 2011). After

merging the three databases and dropping missing values of key variables, as well as excluding finance, government, and utilities (Deb et al. 2017; Kim and Bettis 2014; O'Brien and Folta 2009), we had 4,223 firm-year observations. The sample was further reduced by 1,375 firm-year observations because of discontinuities; we did this to achieve a balanced dataset for our panel threshold model (Hansen 1999). Our final sample consisted of 2,848 firm-year observations between 2008 to 2015. Table 1-1 presents the sample composition by year and by industry. The sample distribution by industry is based on the China Securities Regulatory Commission (CSRC) industry code, which has a two-digit specification. Table 1-1 shows that manufacturing industries have 1600 observations, accounting for approximately 60% of our final sample. Other industries such as real estate, wholesale and retail trade, software, internet, and technology services account for approximately 20% of our sample. As can be seen from the sample distribution by year, observations are strongly balanced with 356 observations each year.

[Insert Table 1-1 about here]

Measurements

Dependent variable

In line with previous literature (Chang and Wong 2009; McWilliams and Siegel 2000; Waddock and Graves 1997), we use return on assets (ROA), measured as net income divided by total assets, to indicate a firm's financial performance. Unlike market-based performance, which may be affected by a range of firm-unrelated factors (Shane and Spicer 1983), ROA indicates the profitability originating from a firm's total assets under its control (Kostopoulos et al. 2011). This measurement of profitability also reflects the competitive advantage a firm gains from its own resources (Barney 1991), largely avoiding the probability of earnings management (Haw et al. 2005) and thus, complying more with the capability argument of our paper.

Independent variable

Firms' charitable donations refer to the amount of philanthropic donations made in a specific year. Acknowledging that this variable is highly skewed (Galaskiewicz 1997), for our main independent variable, we use the natural logarithm transformed amount of total donation, as suggested by prior scholars (Brammer and Millington 2008; Cuypers et al. 2015; Lev et al. 2010; Wang, Choi, and Li 2008; Wang and Qian 2011).

Threshold variable

Following DeAngelo et al. (2006), we use the ratio of retained earnings to total assets (RETA) as the threshold variable to divide the full sample into different life-cycle stages. While Miller and Friesen (1980) suggested a four-stage life-cycle model (with firms moving through the stages of birth, growth, maturity, and revival), it is highly questionable that firms actually move from one stage to another. As Vyakarnam et al. (2000) note, it is inappropriate to set unidirectional linear implications of organismic life-cycle models mechanically. It is also of vital importance to note that firms do change, evolve, or develop over time, but they do not change because of time (Pitariu and Ployhart 2010). For example, although children grow into adults over time, it is not the time that makes them adults; although time is highly related to physical growth, genes and hormones and the physical, mental, and emotional processes relating to growing are responsible for turning children into adults. Likewise, it is not time that causes firms' increased level of competitive advantage, but the strategic resources, competitive environment, and the firm's ability to utilize those resources (Ployhart and Vandenberg 2010). Firms' change process may be more easily and conveniently measured by time (Bollen and Curran 2006; Singer et al. 2003), but this is not always a reliable measurement of this process (Rutherford et al. 2003). Therefore, following previous literature, we believe RETA can identify a firms' life-cycle stage, not only because it captures the general characteristics of the life cycle, but also because it represents firms' capability development while

considering the drawbacks of using cash flow or age to identify the firm's stage in its life cycle.[1]

Moderating variables

In line with prior literature, we measure absorbed slack resources using the industry adjusted ratio of employee costs to total sales (Bradley et al. 2011; Paeleman and Vanacker 2015), a measure that has been found to be a good indicator of firms' absorbed slack resources (Vanacker et al. 2013). A dummy variable of absorbed slack resources is created to indicate whether a firm has abundant absorbed slack resources. When the firm's industry adjusted absorbed slack resources are above the industry's mean level, the firm is coded as 1, and 0 otherwise (Paeleman and Vanacker 2015). To measure unabsorbed slack resources, we use the industry adjusted ratio of the firm's cash flow to total assets (Kim and Bettis 2014; Vanacker et al. 2013), a common measure of companies' unabsorbed slack. This measure is further created as a dummy: a firm whose unabsorbed slack is above the industry mean is coded as 1, and 0 otherwise (Paeleman and Vanacker 2015).

Control variables

We control for firm size, which is measured as the natural logarithm of the total asset (Marquis and Qian 2014; Pan et al. 2014). Firm age is measured by subtracting the companies' initial public offering (IPO) year from our observation year (Wang and Qian 2011; Wang et al. 2008). We control for leverage and access to outside

[1] We justify our use of RETA in this study as follows. First, DeAngelo et al. (2006) argue that RETA is a good reflection of firms' internal-financing capability because this variable measures how much available internal earnings are left after the firm satisfies all related stakeholders—a higher level of firm retained earnings indicates a higher level of firm accumulated performance (Ball et al. 2019). To some extent, performance relates to firms' comprehensive microlevel capabilities (Abell et al. 2008). Thus, we consider firms' accumulated earnings to represent their capability. Second, the variable retained earnings also reflects the firm's predicted future earnings growth. As Ball et al. (2019) demonstrate, retained earnings is an indicator of future earnings yield capability. Third, retained earnings can effectively "average out" the accounting effect through accumulation because accounting accrual estimates will reverse in subsequent periods (Ball et al. 2016), providing a more accurate measurement of firms' composite dynamic capabilities to improve their financial performance (Wilden et al. 2013). Considering these factors, we argue that the RETA ratio is a good indicator of firms' composite capability.

finance by measuring the firm's debt using the ratio of total long-term debt to total assets (Waddock and Graves 1997; Wang and Qian 2011). Further, we include the ratio of intangible assets to total assets to control for brand strength and R&D capability (McWilliams and Siegel 2000), as well as the fixed asset ratio (fixed assets divided by total assets) to measure the firm's capital intensity (Leuz and Oberholzer-Gee 2006). The amount of sales expenses, general, and administrative expenses (SG&A) scaled by total revenue is used to control the firm's level of advertising intensity and visibility (Wang and Qian 2011). Firms' absorbed slack and unabsorbed slack dummies are also included as controls. In addition, the dummy variable of state control is included as a control variable, with firms controlled by government coded as 1 and 0 otherwise (Wang et al. 2008). We also control for the level of industry donation to reflect the industry's average tendency for philanthropy. We use the market-development level represented by gross domestic product (GDP) per capita (i.e., the province's GDP divided by its population) in each province (Marquis and Qian 2014). The inverse Mills ratio (IMR) is also added to control self-selection bias. All these control variables are included in both the first and second stage of Heckman two-step model, except for IMR and industry-level donation. IMR is used only in the second stage for selection-bias control and industry-level donation is used only in the first stage for a reasonable instrumental variable (Wang and Qian 2011). Finally, year effects and industry effects are also controlled to reflect the year and industry differences.

Estimation methods and data analysis

To estimate different life-cycle stages, we use the panel threshold model suggested by Hansen (1999) to estimate the point at which the regression slope changes significantly. The structural change points are defined

by the panel threshold model, allowing the different life-cycle stages to be determined.[2] Since we find two threshold points and considering the characteristics of our sampled firms as Chinese publicly listed firms, we consider three life-cycle-stage intervals in our study from the development stage, to the initial maturity stage as the transition between development and maturity stage, lastly the later maturity stage.

From the threshold points of the above panel threshold model, we generate a life-cycle-stage dummy to reflect the effects of different life-cycle stages on the relationship between CP and CFP. Specifically, according to the threshold value, we set the initial maturity life-cycle-interval dummy as 1 when RETA is larger than the first threshold point and smaller than the second threshold point, and 0 otherwise. Similarly, the later maturity life-cycle-stage-interval dummy is 1, when RETA is larger than the second threshold point, and 0 otherwise. We

[2] We first construct the single-threshold model and then extend it from a single-threshold form to a multiple-threshold form. We begin with a single-threshold model defined as $Y_{it} = u_{it} + \beta_1 \cdot x_{it} \cdot I(q_{it} \leq \gamma) + \beta_2 \cdot x_{it} \cdot I(q_{it} > \gamma) + \theta \cdot x_{it} + \varepsilon_{it}$. I(·) is the index regression function between independent variable and dependent variable when conditions in parenthesis are satisfied. β_i are different regression coefficients for regressions under corresponding conditions indicated in parenthesis. θ is the vector of control variables and γ is the threshold point identified by panel threshold model. $q_{i,t}$ is threshold variable. $\varepsilon_{i,t}$ is the error term. We then test for the null hypothesis H_0: $\beta_1 = \beta_2$ and the alternative H_1: $\beta_1 \neq \beta_2$. Following Hansen (1999), the distribution of F_1 is used to determine whether the null hypothesis of one threshold value is confirmed or rejected, and is calculated as follows: $F_1 = s_0 - s_1(\hat{\gamma})/\sigma^2$; where, s_0 is the sum of squared error at the null hypothesis and $s_1$is the sum of squared error at the alternative hypothesis. Given that the F statistic is not standardized, we use the bootstrap method to obtain its asymptotic distribution and obtain the empirical p-value. We also test whether the actual threshold value is equal to the estimated value $\hat{\gamma} = \gamma$. To do so, we calculate the likelihood-ratio statistics by constructing the nonrejection region as suggested by Hansen (1999). With these two tests, we check both the significance of threshold and the value of the threshold. After we confirmed one-threshold point scenario, we then extend the one-threshold model to a two-threshold model, $Y_{i,t} = u_{i,t} + \beta_1 x_{i,t} \cdot I(q_{i,t} \leq \gamma_1) + \beta_2 x_{i,t} \cdot I(\gamma_1 < q_{i,t} \leq \gamma_2) + \beta_3 x_{i,t} \cdot I(\gamma_2 < q_{i,t}) + \theta x_{i,t} + \varepsilon_{i,t}$ and test the null hypothesis as we did with the one-threshold model. In above equation, γ_1 and γ_2 are the two threshold values that separate our observations into three parts: the group that is smaller than γ_1, the group that is between γ_1 and γ_2, and the group that is larger than γ_2. The assumption of a single-threshold and a multiple-threshold model is the same. In the multiple-threshold model, we further check the null hypothesis of two threshold values versus the one threshold value and the corresponding F_2 statistic, which is calculated as, $F_2 = (s_1(\hat{\gamma_1}) - s_2(\hat{\gamma_2}))/\sigma^2$. We further extend the two-threshold model to a three-threshold model, and calculate F_3, but we could not reject the null of two threshold values and thus, it is only appropriate to retain the two-threshold model with the three life-cycle-stage model (two threshold points divide the overall observation into three intervals). The threshold number test and value of threshold can be found in appendix table 1-1 and appendix table 1-2 and appendix figure 1-1.

then generate each donation coefficient in the life-cycle stage by using the life-cycle dummy described above. Specifically, given the reference coefficient (the original regression coefficient), we generate the coefficient of donation in second and the third life-cycle stage by multiplying the second and third life-cycle stage dummy with the original regression coefficient (the reference group that is viewed as the first life-cycle stage), respectively[3]. Thus, we have three life-cycle stages with different slopes, representing the three different relationships between CP and CFP in different life-cycle stages.

Before we run the regression, we make several sample comparisons to get a general understanding of our sample. Table 1-2 presents the comparison of firms' ROA, donations, cash flow, size, age, and slack resources within different life-cycle stages. According to our method of dividing the life cycle, firms in the development stage of the life cycle have a lower ROA than they do in the maturity life-cycle stages. Firms' level of donation is also the lowest in this stage. However, we do not find any significant trends in three cash-flows (operating, financing, and investing) patterns, age, and firm size. It can also be found that firms' unabsorbed slack resources increase as firms move from growth to maturity life-cycle stage. We further test the difference of ROA in the different life-cycle stages for firms against different levels of donation.

[Insert Table 1-2 about here]

In Table 1-3, we first sort firms into five groups according to their donation level, with column (6) equaling the highest donation / ROA in a specific life-cycle stage, and column (1) equaling the lowest donation / ROA in a specific life-cycle stage. Then the firm's ROA is calculated by quartiles of the firm donations in each sample

[3] The original regression coefficient is considered as the coefficient of donation in first life-cycle stage, the interaction term of the original coefficient and the second life-cycle stage dummy is the coefficient of donation in second life-cycle stage; similarly, the interaction term of original coefficient and the third life-cycle-stage dummy is the coefficient of donation in third life-cycle-stage.

firm. In column (7), we find that the average amount of donation is the highest in the firms in the later maturity stage (8.141) and lowest for firms in the development stage (2.48). Additionally, the dispersion of ROA between the highest-donation firms and the lowest-donation firms is highest in the firms in the later maturity life-cycle stage. For example, in column (9), in which the ROA spread is calculated as the difference between the highest-donation firms (6) and the lowest-donation firms (2), the difference between the highest- and the lowest-donation firms' ROA is 2.502 (12.536 – 10.034) ($p < 0.001$) for later maturity life-cycle-stage firms but only 1.384 (-2.287 - (-3.671)) ($p > 0.1$) for the development life-cycle-stage firms. This seems to suggest that the ROA in later maturity life-cycle-stage firms is more sensitive to firm donations than it is in development life-cycle-stages firms. Given that the highest level of donation is approximately the same in both the initial maturity (15.838) and later maturity (15.939) life-cycle stages (the lowest donation is zero for these two groups), the ROA reacts more sensitively to donation in the later maturity stage than in the initial maturity life-cycle stages (ROA spread = 2.502, $p < 0.001$). Therefore, we believe that if controlling other factors, the higher the level of a firm's maturity, the more sensitive of a firm's ROA to its donation.

[Insert Table 1-3 about here]

Model specification

After we identified life-cycle stage through the panel threshold model, we then use the Generalized Estimating Equation (GEE) model to estimate the CP–CFP relationship, which is an appropriate method for our study because it helps estimate a robust and consistent time-invariant variable (in our model, the state-control dummy is time-invariant) (Ballinger 2004; Paeleman and Vanacker 2015). We take several robustness checks to

ensure our results are robust and reasonable.[4]

The model we use to test the effect of donation on ROA during different life-cycle stages is as follows:

$$ROA_{i,t} = \beta_0 + \beta_1 ROA_{i,t-1} + \beta_2 Donation_{i,t} + \beta_3 Donation_{i,t} * Second\ Lifecycle\ Dummy_{i,t} + \beta_4 Donation_{i,t} * Third\ Lifecycle\ Dummy_{i,t} + \beta_5 Age_{i,t} + \beta_6 GDP\ Per\ Capita_{region,t} + \beta_7 State\ Dummy_{i,t} + \beta_8 Unabsorbed\ Slack_{i,t} + \beta_9 Absorbed\ Slack_{i,t} + \beta_{10} Selling\ Expense\ Ratio_{i,t} + \beta_{11} Fixed\ Asset\ Ratio_{i,t} + \beta_{12} Intangible\ Asset\ Ratio_{i,t} + \beta_{13} Debt\ Ratio_{i,t} + \beta_{14} Size_{i,t} + \beta_{15} Inverse\ Mills\ Ratio_{i,t} + \sum \beta_j\ Industry\ Dummies + \sum \beta_k\ Year\ Dummies + \varepsilon_{i,t} \quad \textbf{Eq (1)}$$

Where β_0 is the time-invariant intercept; β_1 to β_{15} are the slope coefficients of various control and independent variables. We also add industry and year dummy variables to control for industry fixed effects and changing economic conditions. Given that our main hypothesis predicts that firms' CP–CFP relationship changes from negative to positive as they go through from the development life-cycle stage to the maturity life-cycle stage, in Eq (1), we expect β_2 to be negative and statistically significant; β_3 to be positive and statistically significant; β_4 to be positive and statistically significant, and the absolute value of β_4 and β_3 to be larger than the absolute value of β_2. β_j and β_k are year industry fixed effects and year fixed effects, respectively. $\varepsilon_{i,t}$ refers to the error term, and all firms are coded as i in year t.

[4] To eliminate any first-order autocorrelation issues (Arellano and Bond 1991), we create a dynamic model by adding a lagged dependent variable following Greene (2003). To minimize the problem of heteroskedasticity, we provide a Huber–White–Sandwich robust standard error (Wooldridge 2010). Further, we treat outliers in our database by replacing the extreme values at 1% and 99% (Deb et al. 2017). With respect to endogeneity, we use the Heckman two-stage model (Certo et al. 2016; Wang et al. 2008; Wang and Qian 2011). Heckman (1979) suggests using a control variable with predictive power toward one part of the estimated equation. We choose here "industry-level donation" as our instrumental control variable because peer-industry behavior has been found to influence philanthropic behavior (Galaskiewicz and Burt, 1991), but not firm-level financial performance (Wang and Qian, 2011). We first use a Probit model to estimate the probability of making donation; we then calculate the IMR and add it in our second-stage Heckman regression. In further robustness tests, we use a fixed-effects model to compare with the results of the GEE model. We further use a 2SLS model to help mitigate the problem of endogeneity caused by omitted variables. Finally, we run both the fixed-effects and GEE models based on matched samples from the PSM result. In all cases, we find consistent results.

RESULTS

Table 1-4 presents the variables used in the Heckman first-stage model. The descriptive statistics and correlation matrix are presented in this table. As expected, we find firm size, age, and debt ratio are all positively associated with firms' choice of making charitable donations, which indicates that the larger and the older the firm, the higher the probability of engaging in philanthropy, and the higher the level of debt ratio, the higher the probability of engaging in philanthropy. In addition, we can find that the state-control dummy has a positive association with firms' engaging in philanthropy, indicating that state ownership has a positive influence on CP. All these results are comparable to those of Wang and Qian (2011), who used a similar Chinese sample. We also find that firms' ROA is positively associated with the choice of engagement in CP, which illustrates that a firm's financial condition or profitability plays an important role in determining its engagement in socially responsible behavior (Campbell 2007; Clarkson et al. 2011; McWilliams and Siegel 2001). We check the problem of multicollinearity by testing variance inflation factors (VIF) for each independent variable. The results (VIF mean level of 1.23) indicate no problem of multicollinearity in our model.

Table 1-5 presents the results from the Probit model of the Heckman first-stage regression. The dependent variable—firms' binary choice of charitable donation—suggests whether a firm engages in philanthropic activities. Model (1) shows that basic firm-level variables, for example, firm visibility, state ownership, and age, positively affect CP, indicating that if the firm is more visible, older, and controlled by the government, it is more like to engage in CP. When unabsorbed slack resources and absorbed slack resources are added to the model (Model (2)), it can be observed that only absorbed slack has a significant, positive effect on CP, whereas unobserved slack resources yield insignificant results. Further, when ROA is added (Model (3)), we see that it has a positive effect on engaging in philanthropy, as suggested by previous studies (Campbell 2007; McWilliams

and Siegel 2001). Finally, a consistent and positive effect is found in Models (2) and (3) for industry-level donation, indicating that peer behavior has an important effect on a firm's philanthropic behavior (Galaskiewicz and Burt 1991).

[Insert Tables 4 and 5 about here]

We then move on to the Heckman second-stage model and test the CP–CFP relationship in different life-cycle stages. Table 1-6 presents the descriptive statistics and correlation matrix of the variables used in the Heckman second-stage model. We see that charitable donation is positively associated with ROA, which provides evidence that engaging in CP will usually promote firms' financial performance (Orlitzky et al. 2003). Indeed, in a meta-analysis, Margolis et al. (2007) demonstrated that 50% of past empirical studies find a positive relationship between CP and CFP. We also find that the variables GDP per capita, unabsorbed slack resources, and lagged ROA are positively associated with ROA, which shows that macroeconomic conditions, a firm's free cash availability, and the firm's previous year's financial condition have positive effects on firm ROA (Wang and Qian 2011). Intangible assets are also positively associated with ROA, suggesting the importance of intangible assets to firm financial performance (Surroca et al. 2010). However, we find that a firm's absorbed slack is negatively correlated with ROA, suggesting that having more absorbed slack is detrimental to a firm's financial performance.

[Insert Table 1-6 about here]

Table 1-7 presents the results of the Heckman second–stage regression model based on the GEE model after controlling for the IMR (self-selection bias) generated from the Heckman first-stage model. The table shows the relationship between CP and CFP in different life-cycle stages and the moderating effect of unabsorbed and absorbed slack resources.

In the GEE model, that is, in Model (1) of Table 1-7, we reveal that CP (the development life-cycle stage [first life-cycle stage], main relationship) is negatively associated with firms' ROA (coefficient = -0.247, $p < 0.01$), but the relationship is positively moderated by the life-cycle dummy (second and third life-cycle dummy). We further observe that the second life-cycle dummy positively moderates the main relationship, with the moderating effect being stronger than the main effect of CP (coefficient = 0.269, $p < 0.001$) (CP–CFP relationship in initial maturity life-cycle stage [second life-cycle stage] is -0.247 + 0.269 = 0.022). Similarly, in model (1) the third life-cycle dummy also positively moderates the main relationship, with the moderating effect being stronger than the main effect of CP (coefficient = 0.294, $p < 0.001$) (CP–CFP relationship in the later maturity life-cycle stage [third life-cycle stage] is -0.247 + 0.294 = 0.047). It is thus observed that while the relationship between CP and CFP is negative in the development life-cycle stage (coefficient = -0.247, $P < 0.001$), it becomes positive and progressively stronger in the maturity life-cycle stages (coefficient = 0.269 for the initial life-cycle stage and 0.294 for the later maturity life-cycle stage). This result provides full support for Hypothesis 1 and Hypothesis 2, which predict that the relationship between CP and CFP will be negative in the development life-cycle stage and become positive in the maturity life-cycle stage. As seen in Figure 1-2, the relationship between CP and CFP is negative in the development stage and changes to being positive in the initial and later maturity stages.

We add the interaction term of absorbed slack resources and each life-cycle stage dummy (as can be observed in Models (2), (3), and (4)). As shown in Model (2), the moderating effect of absorbed slack resources on the CP–CFP relationship is significantly positive (coefficient = 0.065, $p < 0.01$), denoting that in the development life-cycle stage, the higher the firm's absorbed slack resources, the higher the firms' ROA. As firms move from the development life-cycle stage to the initial mature life-cycle stage (Model (3)), the absorbed slack

resources continue to positively moderate the CP–CFP relationship (coefficient = 0.1, $p < 0.001$). In the later maturity life-cycle stage (Model (4)), the moderating effect of absorbed slack resources on the CP–CFP relationship is significantly negative (coefficient = 0.098, $p < 0.01$). Because the moderating effect of absorbed slack resources changes from positive to negative as firms move from the growth to the maturity life-cycle stage (shown in figures 1-3 to 1-5), our findings partially support Hypothesis 3, which predicts that absorbed slack resources should have consistent negative moderating effects in both the development and maturity life-cycle stages.

[Insert Table 1-7 about here]

[Insert Figure 1-2 about here]

[Insert Figures 1-3 to 1-5 about here]

In Table 1-7, Models (5) to (7) present the moderating effects of unabsorbed slack resources on the CP–CFP relationship in each life-cycle stage. We find that in the development life-cycle stage (Model (5)), unabsorbed slack resources have an insignificant moderating effect on the CP–CFP relationship (coefficient = -0.016, $p > 0.1$). However, as firms transit from the development life-cycle stage to the initial mature life-cycle stage, the moderating effect of unabsorbed slack resources becomes significantly negative (coefficient = -0.04, $p < 0.05$) (Model (6)). Finally, in the later maturity life-cycle stage, the moderating effect of unabsorbed slack changes to significantly positive (coefficient = 0.066, $p < 0.05$) (Model (7)). These results do not support Hypothesis 4a, which predicts a negative moderating effect of unabsorbed slack in the development life-cycle stage. But we find a negative moderating effect of unabsorbed slack in the initial maturity stage, and a positive moderating effect in the later maturity stage. These moderating effects are presented in Figures 1-6 and 1-7.

[Insert Figures 1-6 and 1-7 about here]

In a robustness check,[5] we find that the relationship between CP and CFP in the different life-cycle stages holds in a fixed-effects model; however, unlike in Table 1-7 of Model (7), the moderating effect of unabsorbed slack in the maturity life-cycle stage is insignificant. We also try to mitigate the endogeneity issue by using the 2SLS model and use the predicted values of philanthropy from the first-stage regression and find only one threshold point (two life-cycle stages). The overall relationship between CP and CFP changes from negative to positive as firms move from the first life-cycle stage to the second life-cycle stage (under the scenario of the 2SLS model). Finally, we use PSM to obtain a matched sample for firms engaged and not engaged in CP. We then use this matched new sample to obtain one threshold point, and the CP–CFP relationship also changes from positive to negative from the first life-cycle stage to the second life-cycle stage (under the scenario of PSM method). The moderating effect of absorbed slack resources are consistently negative under the GEE model, thus fully supporting Hypothesis 3, while we still partially support Hypothesis 4 in terms of moderating effect of unabsorbed slack on CP–CFP relationship in both GEE and fixed-effect model. Overall, we find that the CP–CFP relationship over life-cycle stages is robust under different models, and the moderating effects are partially supported by different models.

Robustness Checks

In order to confirm the validity of our results of the stage-like relationship between CP and CFP, we run additional robustness tests. These tests use different methods to guarantee that the coefficient is unbiased by controlling the endogeneity problem. First, we use the Hausman test to determine the fixed effect model (FE model) over the random effect model (RE model) and find consistent results in the fixed-effect model. Second,

[5] Due to limited space, all robustness checks are available upon request to the authors.

we use two-stage Least Square (2sls) (Deng, Kang, & Low, 2013) model to predict Donation (using instrumental variables and control variables) in the first stage and use the predicted value of Donation as a new independent variable in second-stage ROA regression. Based on the new predicted Donation, we re-estimate the threshold from Panel Threshold Model. We further use Propensity Score Matching (PSM), a commonly used method to cope with endogeneity in firms' non-market strategy literature (Choi, Jia, & Lu, 2014; Haveman, Jia, Shi, & Wang, 2017; Zhang, Marquis, & Qiao, 2016) to mitigate endogeneity concerns by matching firms receiving treatment (have philanthropic behavior) with those control groups. According to the propensity score (the predicted likelihood of receiving treatment), a sample of observations with and without treatment is formed.[6] Based on this matched sample, we further implement the FE model and the GEE model and find consistent results.

First, in table 1-8, we perform an FE model by controlling all factors that vary across individuals but are constant over time, and for all factors that vary over time but are constant across individuals (Wooldridge, 2010). We notice that in model (1), firms' CP (1st life-cycle stage, main relationship) is negatively correlated with ROA, and the second and third lifecycle Dummy positively moderate the 1st lifecycle stage with the effects being stronger than 1st stage coefficient (coefficient in 1st stage is -0.242, $p < 0.05$; coefficient in 2nd stage is 0.257, $p < 0.05$; coefficient in 3rd stage is 0.257, $p < 0.01$). Model (2) to model (7) display the moderating effects of absorbed slack and unabsorbed slack.

[6] To ensure the matching quality, we require the maximum difference between propensity score of Donation firms and propensity score of potential controls does not exceed 0.025 in absolute value. Therefore, under the nearest neighbor matching method, any propensity score distance above 0.025 between two observations will be automatically dropped. Given this control, after pooling those observations with treatment (philanthropic behavior) and those potential controls with nearest propensity score, our final matched sample consists 824 observations.

[Insert Table 1-8 about here]

Second, in table 1-9, based the original threshold value, we use OLS (model (1) to model (3)) to test CP–CFP relationship, we notice that CP–CFP relationship changes from negative to positive as firms move from development life-cycle stage to mature life-cycle stage, consistent with our previous results. We perform an instrumental variable (IV) estimation using 2sls regression from model (4) to model (7). In model (4), we regress the Donation on two instrumentals and control variables. We use lagged Donation and score of corporate social responsibility as two instrumental variables. From the Cragg-Donald Wald F statistic (weak identification), we reject the null hypothesis that instrumental variables are weak. From the Sagan test (overidentification test), we accept the null hypothesis that instrumental variables are not correlated with the error term in second stage regression. Therefore, we believe our selection of instrumental variables is rational. In model (5), we regress ROA on predicted Donation estimated from the first stage and other controls. In determining the threshold point that indicates life-cycle dummies, we re-estimate the threshold value based on the predicted value of Donation estimated from the first stage. Different from the previous two-threshold model, we only find one-threshold point and two life-cycle stages.[7] Different from table 1-7, here, we find one threshold point (-0.0124, $p < 0.001$) that divides two lifecycle stages. We notice that in model (5), CP (first life-cycle stage, main relationship) is negatively associated with ROA and positively moderated by second life-cycle stage dummy (coefficient = 1.193, $p < 0.001$) with the moderating effect being stronger than 1st life-cycle stage coefficient (coefficient = -1.003, $p < 0.001$). Although we have two life-cycle stages here, the fact that the relationship between CP and CFP changes from negative to positive remains consistent, reinforcing our hypothesis 1 and hypothesis 2. In model (6), we

[7] The threshold number test and value of threshold can be found in appendix table 1-3 and appendix table 1-4 and appendix figure 1-2.

use three instrumental variables: Lagged Donation, CSR, and Lagged CSR (the Cragg-Donald Wald F statistic and Sagan statistic all show that they are valid) to estimate the predicted value of Donation and then in model (7), we find that relationship between CP and CFP changes from negative to positive. According to Log-likelihood, we choose the model (6) with larger log-likelihood indicating a better model fit and based on predicted Donation in this model, we further run second-stage regression and moderating effects of slack. As in model (8), (9), (10), and (11), we find that the moderating effect of absorbed slack is the insignificant and moderating effect of unabsorbed slack is only positively significant in development life-cycle stage.

[Insert Table 1-9 about here]

Third, in table 1-10, we employ the PSM method proposed by Rosenbaum & Rubin (1983). We first estimate a probit model where we regress the Donation dummy on firm-level variables and industry and year controls. Following Faccio & Hsu (2017), we use the firm's ROA, sales growth ratio, size, and industry and year indicators as matching dimensions and regress the dummy of Donation on those variables. Then, firms with treatment will be matched to those without treatment according to the nearest propensity scores. After we pool those matched samples (both with treatment and without treatment) together, firms with Donation will be regarded as exogenous. The endogeneity issue is largely ameliorated. The matching quality is good because we find that t-tests of differences between two groups and most industry and year indicators were insignificant ($p > 0.05$). In this new matched sample, we re-estimate threshold point and find that only one threshold point exists (two-stage life-cycle model),[8] model (1) shows that CP (first life-cycle stage, main relationship) is first negatively associated with ROA (coefficient = -0.005, $p < 0.1$), then positively moderated by second life-cycle

[8] The threshold number test and value of threshold can be found in appendix table 1-5 and appendix table 1-6 and appendix figure 1-3.

dummy with the effect being stronger than first lifecycle stage coefficient (coefficient = 0.013, $p < 0.001$). In model (2) and model (3), we find significant moderating effects of absorbed slack and fully support hypothesis 3, which states that absorbed slack has a consistent negative moderating effect throughout the firm life-cycle stage. From model (4) to model (6), we find no significant moderating effects of unabsorbed slack. In FE model, CP–CFP relationship also changes from negative to positive (coefficient =-0.0237, $p < 0.05$; coefficient =0.102, $p < 0.05$). Model (7) to model (10) show the moderating effects of both kinds of slack, with absorbed slack has a significant moderating effect in the mature stage and no significant moderating effects can be found for unabsorbed slack. Overall, we consistently find that firms' CP–CFP relationship changes from negative to positive throughout the life-cycle stage.

[Insert Table 1-10 about here]

Finally, we use the alternative measures of financial performance to reinforce our results are robust. As can be seen in Table 1-11, we use EBITDA ratio as the dependent variable to indicate the firm's financial performance and find only one threshold point which divides the life-cycle stage into two sub subsamples. We find that the the moderating effect of maturity life-cycle stage dummy (coefficient = 0.0054, $p <0.01$) is stronger than the first-stage CP-CFP relationship (coefficient = -0.0047, $p <0.01$), thus fully support hypothesis 1. However, the moderating effect of absorbed slack is positive in the maturity stage and the moderating effect of both unabsorbed slack is insignificant in both development and maturity life-cycle stage. We could not support hypothesis 2 and hypothesis 3. In table 1-12, we further use the fixed-effect model to confirm the results found in the GEE model. These results are consistent in supporting hypothesis 1.

[Insert Table 1-11 and Table 1-12 about here]

DISCUSSION

This study investigated the relationship between CP and CFP while incorporating capability heterogeneities across life-cycle stages. The results demonstrate that incorporating the dynamic nature of firms' capability of engaging in CP is important for enriching knowledge of the financial effects of firms engaging in philanthropy. We find that the CP–CFP relationship can both be positive and negative in firms' different life-cycle stages; specifically, we argue that a low capacity to utilize resources in the development life-cycle stage makes firms unable to generate sufficient benefits to cover the costs related with CP. However, the increased level of firms' capacity to utilize resources that comes in the maturity life-cycle stage, the CP–CFP relationship becomes positive. In sum, our findings suggest that firms in the development life-cycle stage cannot effectively allocate resources and use their resources to manage stakeholders' needs. Throughout the learning process associated with gaining maturity, firms in the maturity stage gain trust and legitimacy from stakeholders and become more capable of managing and allocating resources to meet stakeholders' needs.

The findings of this study have several important implications for CP literature. First, the CP literature is marked by long-standing conflicting empirical results on the CP–CFP relationship. This study helps reconcile previous debates and mixed findings (Friedman 1970; Orlitzky et al. 2003; Waddock and Graves 1997). More importantly, most current studies focus on the effect of the *amount* of CP, largely overlooking the firm capacity to utilize resources when engaging in CP. In this paper, we address this important omission by incorporating the concept of the firm life cycle with firm capability development, and finding that in different life-cycle stages, the CP–CFP relationship varies in accordance with these stages.

Second, we contribute to the literature on slack resources by incorporating firm capacity to utilize slack resources (absorbed and unabsorbed). Previous literature on slack resources mainly focuses on the relationship

between slack resources and firm performance (Daniel et al. 2004; George 2005; Paeleman and Vanacker 2015). Research has long ignored whether and how a firm's capability of utilizing slack resources makes a difference to firm financial performance. This study fills this gap by showing that in different life-cycle stages, firms' slack resources (absorbed and unabsorbed) differently moderate the CP–CFP relationship, indicating that capacity to utilize slack resources determines the benefits firms can achieve. In addition, most studies on slack resources consider slack resources as a separate concept. Very little research attention is paid to whether slack resources can be analyzed in combination with other activities of firms such as CP, which is a resource-using behavior. We fill this gap by examining CP behavior in combination with different types of slack resources within different life-cycle stages; our results demonstrate that the value created by CP, which we expect to be affected by the capacity to utilize slack resources to engage in CP, differ significantly in different life-cycle stages.

Third, our study also suggests that firms should consider when and how to engage in CP, particularly when they face resource constraints and a lack of capabilities because not all CP will be beneficial to firms' CFP. Firms that want to extract positive results from CP need to be qualified to engage in such activities and must not simply dismiss CP as costly behavior that is detrimental to the firms' valuation (Friedman 1970). Developing the corresponding capability of utilizing resources and managing stakeholders' expectations would be of critical importance in increasing both firm value and social welfare, which is also known as "doing well by doing good" (Waddock and Smith, 2000).

Fourth, we also contribute to the methodology of dividing samples. Unlike previous literature that manually separates full samples into subsamples, we use a more innovative method of the panel threshold model to obtain the threshold points from the overall model fit given the control variables and dependent variables used. This method specifically deals with the data analyzed and provides the specific structural change points according to

the dataset, largely overcoming the potential bias that results from the inaccurate method of sample division.

Limitations and future research

Our paper is not without limitations. Although our paper focuses on capability development of using resources to engage CP, we only look at one aspect of socially responsible behavior–CP. It is also important to consider the role of capability in other aspects of socially responsible behavior such as environmental behavior and corporate governance behavior or in other countries other than China. Future research can extend this line of research in several directions. First, future research should investigate whether the issue of capability matter in other socially responsible behavior of firms such as environmental activities. Second, research on the CP–CFP relationship should be extended beyond the Chinese market. It would be interesting to investigate whether the benefits of capability development are more valuable in developed institutional environments such as in the United States. Third, future studies should also examine whether the capability development of engaging in socially responsible behavior results from the motivation gained from the positive feedback related to good performance or other positive rewards. It is highly possible that firms' capability development may be hampered if they are not rewarded.

Conclusions

The benefits achieved from CP depend on firms' capability of engaging in CP. Thus, the benefits of engaging in CP in the development life-cycle stage may largely deteriorate because of the firm's lack of capability in allocating resources and managing stakeholders' needs and expectations effectively. However, the benefits of CP in the maturity life-cycle stage are more positive and pronounced. Hence, simply engaging in CP may have limited effects on enhancing economic return for firms. Rather, firms can improve expected returns from CP by more effectively managing and satisfying stakeholders' expectations through CP when making

decisions about their engagement in CP. We believe including the concept of firm capability concerning engaging CP will help future research better understand different firm-level outcomes of engaging in CP, which include but are not limited to CFP.

Table 1-1: Sample Description by Year and Industry

Year	N	%	Cum. (%)	CSRC industry code	Two-digit code	N	Percentage	Cum. (%)	Industry name
2008	356	12.5	12.5	A	01-03	35	1.23	1.23	Agriculture, forestry and fisheries
2009	356	12.5	25	B	06-09	156	5.48	6.71	Mineral industries
2010	356	12.5	37.5	C	13-41	1,600	56.14	62.89	Manufacturing
2011	356	12.5	50	D	44-46	163	5.76	68.61	Electricity, heat, and natural gas supplies
2012	356	12.5	62.5	E	47-48	67	2.37	70.96	Construction industries
2013	356	12.5	75	F	51-52	115	4.06	75.00	Wholesale and retail trade
2014	356	12.5	87.5	G	54-58	81	2.86	77.84	Transportation communications
2015	356	12.5	100	I	63-65	74	2.61	80.44	Information communications
Total	2,848	100		K	70	239	8.23	88.48	Real estate
				L	72	27	0.95	89.43	Lease services
				N	78	22	0.78	90.20	Environmental and water supplies
				R	85-86	213	7.52	98.02	Software, internet, and technology services
				S	90	56	1.98	100	Other
				Total		2,848	100		

Note: This table presents the year and industry—classification is based on the China Securities Regulatory Commission (CSRC) industry code with two-digit specification—distributions for the 2,848 industry-year observations between 2008 and 2015 that comprise the sample.

Table 1-2: Comparison of Firm's Characteristics Between Different Life-cycle Stages

Life Cycle	ROA	Donation	Operating cash flow	Investing cash flow	Financing cash flow	Size	Age	Absorbed slack	Unabsorbed slack
Development Stage	-1.378	2.178	18.901	17.740	18.721	22.017	12.036	0.300	0.282
Initial Maturity Stage	4.567	6.060	20.465	18.808	20.483	23.464	11.026	0.247	0.277
Later Maturity Stage	10.303	6.868	20.084	18.345	18.996	22.534	12.320	0.299	0.426
Average	5.320	6.049	20.343	18.633	20.296	23.249	11.287	0.258	0.303

Note: Development stage is treated as a dummy variable, coded as 1 when retained earnings to total assets (RETA) is smaller than the first threshold value (-0.0124), and 0 otherwise. The Initial Maturity stage is treated as a dummy variable, coded as 1 when RETA is larger than the first threshold value (-0.0124) and smaller than the second threshold value (0.2796), and 0 otherwise. The Later Maturity stage is treated as a dummy variable, coded as 1 when RETA is larger than the second threshold value (0.2796), and 0 otherwise. The number of observations for the development stage, the initial maturity stage, and the later maturity stage is 110, 2,250, and 488, respectively.

Table 1-3: Comparison of Firms' donation and ROA in each life-cycle stage

	N	Low	Median low	Median	Median high	High	Average donation/ ROA	Donation spread (6)-(2)	ROA spread (6)-(2)	Two sample t-test (t-stats)	p-value
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
All firms' donation	2,848	0.000	0.000	0.000	13.591	15.772	5.873	15.772		-117.815	0.000
All firms' ROA		4.933	4.900	5.189	5.712	5.870	5.321		0.937	-3.137	0.002
Development-stage firms' donation	110	0.000	0.000	0.000	0.000	12.398	2.480	12.398		-6.940	0.000
Development-stage firms' ROA		-3.671	-3.839	0.683	1.499	-2.287	-1.523		1.384	-0.582	0.564
Initial maturity-stage firms' donation	2,250	0.000	0.000	0.000	13.654	15.838	5.899	15.838		-105.134	0.000
Initial maturity-stage firms' ROA		4.573	4.503	4.547	4.667	4.546	4.567		-0.027	0.108	0.914
Later maturity-stage firms' donation	488	0.000	0.000	11.002	13.763	15.939	8.141	15.939		-56.625	0.000
Later maturity -stage firms' ROA		10.034	9.550	9.010	10.388	12.536	10.304		2.502	-3.261	0.001

Note: This table reports the average difference of return on assets (ROA) for all firms, firms in the development life-cycle stage, initial maturity life-cycle stage, and later maturity life-cycle stage. The observations are sorted into five classes according to firms' donation (2 = lowest, 6 = highest). Average donation/ROA is the average arithmetic value of the donation and ROA for the full sample, development life-cycle stage sample, initial maturity life-cycle stage sample, and later maturity-stage sample. "ROA spread (6)-(2)" is the ROA difference between the highest-donation firms (6 = high) and the lowest-donation firms (2 = low) in each group (all firms, firms in the development life-cycle stage, initial maturity life-cycle stage, and later maturity life-cycle stage). "Donation spread (6)-(2)" is the donation difference between the highest-donation firms and the lowest-donation firms in each group (all firms, firms in the development life-cycle stage, initial maturity life-cycle stage, and later maturity life-cycle stage).

Table 1-4: Descriptive Statistics and Correlations for the First Stage of Heckman Second-stage Regression

		Mean	s.d.	1	2	3	4	5	6	7
1	Donation dummy	0.231	0.421							
2	ROA	0.045	0.056	0.074***						
3	Debt ratio	0.050	0.090	0.107***	-0.071***					
4	Unabsorbed slack	0.376	0.484	-0.063***	0.154***	-0.167***				
5	State dummy	0.408	0.492	0.183***	-0.059***	0.211***	-0.093***			
6	Absorbed slack	0.312	0.463	-0.025***	-0.137***	-0.083***	0.004	-0.029***		
7	Selling expense ratio	0.076	0.263	0.023***	-0.008	-0.047***	0.009	-0.061***	0.061***	
8	Fixed asset ratio	0.231	0.177	0.005	-0.092***	0.259***	-0.243***	0.194***	0.024***	-0.082***
9	Intangible asset ratio	0.049	0.069	-0.012	-0.026***	0.032***	-0.107***	0.045***	0.042***	-0.030***
10	Size	21.876	1.497	0.436***	0.042***	0.301***	-0.137***	0.301***	-0.146***	-0.001
11	Age	9.072	6.311	0.127***	-0.145***	0.209***	-0.214***	0.358***	0.001	-0.017**
12	Industry-level donation	13.125	3.592	0.059***	0.019**	0.021***	-0.011	0.033***	-0.053***	0.018**

		Mean	s.d.	8	9	10	11
8	Fixed asset ratio	0.231	0.177				
9	Intangible asset ratio	0.049	0.069	0.062***			
10	Size	21.876	1.497	0.036***	-0.059***		
11	Age	9.072	6.311	0.080***	0.053***	0.177***	
12	Industry-level donation	13.125	3.592	-0.055***	-0.017**	0.143***	0.055***

Note: Significance level: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 1-5: Probit Estimates for Heckman First-stage Model: Giving Choice Regressed on Firm, Subnational, and Industry Controls

	Probit Regression		
	(1)	(2)	(3)
Debt ratio	-0.612*	-0.408*	-0.258
	(-4.598)	(-2.533)	(-1.596)
State dummy	0.169*	0.199*	0.221*
	(6.607)	(7.086)	(7.815)
Selling expense ratio	0.111**	0.046	0.05
	(3.266)	(1.051)	(1.145)
GDP	-0.049*	0.071*	0.059*
	(-2.058)	(2.435)	(2.039)
Fixed asset ratio	-0.096	-0.223*	-0.168
	(-1.410)	(-2.348)	(-1.755)
Intangible asset ratio	0.134	-0.232	-0.208
	(0.816)	(-1.191)	(-1.060)
Size	0.445*	0.520*	0.508*
	(46.348)	(42.245)	(41.111)
Age	0.006**	0.006**	0.008*
	(2.865)	(2.664)	(3.330)
Industry-level donation	-0.003	0.011*	0.011*
	(-1.069)	(2.398)	(2.288)
Unabsorbed slack		-0.02	-0.046
		(-0.743)	(-1.693)
Absorbed slack		0.146*	0.175*
		(5.165)	(6.145)
ROA			2.697*
			(10.391)
Industry fixed effects	no	yes	yes
Year fixed effects	no	yes	yes
Intercept	-10.085*	-13.602*	-13.393*
	(-30.768)	(-31.743)	(-31.146)
N	17,504	17,504	17,504
Pseudo R square	0.184	0.225	0.231
LR chi2	3,514.517	4,315.105	4,426.048
Log likelihood	-7810.96	-7410.66	-7355.19
Incremental χ^2 of (2) to (1)		800.59***	
Incremental χ^2 of (3) to (2)			911.53***

Note: Significance level: † p < 0.1, * p < 0.05, ** p < 0.01, *** p < 0.001. GDP = gross domestic product.

Table 1-6: Descriptive Statistics and Correlations for Heckman Second-Stage Regression

	Variables	Mean	s.d.	1	2	3	4	5	6	7
1	ROA	5.320	4.913							
2	Lagged ROA	5.873	5.171	0.649***						
3	Donation	6.049	7.221	0.063***	0.062***					
4	Initial Maturity stage dummy	0.790	0.407	-0.297***	-0.318***	0.003				
5	Later Maturity stage dummy	0.171	0.377	0.461***	0.460***	0.052***	-0.882***			
6	Age	11.287	5.227	-0.068***	-0.053***	-0.012	-0.097***	0.090***		
7	GDP per capita	10.740	0.506	0.124***	0.076***	0.029	0.078***	-0.051***	-0.246***	
8	State dummy	0.587	0.492	-0.076***	-0.049***	-0.028	0.032*	-0.046**	0.193***	-0.058***
9	Unabsorbed slack	0.303	0.460	0.137***	0.161***	-0.014	-0.108***	0.122***	-0.066***	-0.004
10	Absorbed slack	0.258	0.438	-0.142***	-0.078***	-0.021	-0.049***	0.043**	-0.018	-0.063***
11	Selling expense ratio	0.081	0.121	-0.016	-0.041**	0.127***	-0.029	0.056***	-0.038**	0.006
12	Fixed asset ratio	0.245	0.192	-0.039**	-0.014	-0.096***	-0.042**	0.001	-0.008	-0.158***
13	Intangible asset ratio	0.050	0.086	0.091***	0.094***	0.002	-0.077***	0.087***	-0.022	-0.056***
14	Debt ratio	0.082	0.108	-0.099***	-0.094***	-0.077***	0.222***	-0.232***	0.061***	-0.049***
15	Size	23.249	1.830	-0.203***	-0.204***	0.310***	0.228***	-0.178***	0.058***	0.120***
16	Inverse Mills ratio	1.012	0.546	0.001	0.051***	-0.320***	-0.093***	0.027	-0.285***	0.033*

		Mean	s.d.	8	9	10	11	12	13	14	15
8	State dummy	0.587	0.492								
9	Unabsorbed slack	0.303	0.460	-0.02							
10	Absorbed slack	0.258	0.438	-0.027	0.023						
11	Selling expense ratio	0.081	0.121	-0.282***	-0.017	0.150***					
12	Fixed asset ratio	0.245	0.192	0.210***	-0.159***	-0.002	-0.311***				
13	Intangible asset ratio	0.050	0.086	0.176***	-0.054***	-0.031*	-0.154***	0.026			
14	Debt ratio	0.082	0.108	0.200***	-0.105***	-0.152***	-0.302***	0.296***	0.015		
15	Size	23.249	1.830	0.097***	-0.103***	-0.096***	0.226***	-0.156***	-0.056***	0.118***	
16	Inverse Mills ratio	1.012	0.546	-0.233***	0.101***	0.042**	-0.179***	0.107***	-0.02	-0.095***	-0.804***

Note: Significance level: * p < 0.1, ** p < 0.05, *** p < 0.01. The number of observations is 2,848.

Table 1-7: Estimates for Heckman Second-stage Models:
Regression of ROA on Donation with Different Life-cycle Dummies, and Firm, Subnational, and Industry-level Controls

	Generalized estimating equation (GEE)						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Lagged ROA	0.154***	0.155***	0.153***	0.152***	0.154***	0.153***	0.155***
	(6.713)	(6.802)	(6.724)	(6.637)	(6.684)	(6.674)	(6.737)
Development stage (main regression): donation (H1)	-0.247**	-0.267***	-0.245**	-0.249**	-0.242**	-0.248**	-0.247**
	(-3.170)	(-3.509)	(-3.102)	(-3.194)	(-3.120)	(-3.166)	(-3.179)
Initial Maturity stage: donation*second life-cycle dummy (H2)	0.269***	0.275***	0.245**	0.271***	0.269***	0.281***	0.269***
	(3.435)	(3.577)	(3.085)	(3.468)	(3.446)	(3.565)	(3.440)
Later Maturity stage: donation*third life-cycle dummy (H2)	0.294***	0.296***	0.290***	0.321***	0.295***	0.293***	0.266**
	(3.658)	(3.753)	(3.579)	(3.919)	(3.684)	(3.641)	(3.248)
Age	-0.236***	-0.238***	-0.236***	-0.233***	-0.236***	-0.236***	-0.236***
	(-8.886)	(-8.904)	(-8.893)	(-8.802)	(-8.885)	(-8.883)	(-8.880)
GDP per capita	0.591*	0.601*	0.610*	0.595*	0.585*	0.590*	0.617*
	(2.261)	(2.292)	(2.324)	(2.275)	(2.236)	(2.265)	(2.358)
State dummy	-3.677***	-3.673***	-3.670***	-3.670***	-3.679***	-3.689***	-3.690***
	(-10.370)	(-10.434)	(-10.490)	(-10.385)	(-10.387)	(-10.443)	(-10.421)
Unabsorbed slack	0.610***	0.632***	0.632***	0.601**	0.698**	0.780***	0.526**
	(3.310)	(3.431)	(3.441)	(3.275)	(3.190)	(3.689)	(2.792)
Absorbed slack	-3.646***	-4.047***	-4.132***	-3.526***	-3.650***	-3.655***	-3.640***
	(-12.409)	(-13.424)	(-14.325)	(-11.814)	(-12.433)	(-12.471)	(-12.424)
Selling expense ratio	-0.770	-0.741	-0.761	-0.860	-0.810	-0.872	-0.771
	(-0.405)	(-0.395)	(-0.412)	(-0.455)	(-0.425)	(-0.460)	(-0.408)
Fixed asset ratio	2.355***	2.370***	2.385***	2.334***	2.355***	2.391***	2.406***
	(3.487)	(3.519)	(3.558)	(3.466)	(3.486)	(3.531)	(3.579)
Intangible asset ratio	2.775*	2.944*	2.957*	2.680*	2.778*	2.820*	2.839*
	(2.170)	(2.297)	(2.319)	(2.113)	(2.175)	(2.203)	(2.211)
Debt ratio	0.971	0.999	0.951	0.938	0.981	0.974	0.946

	(1.018)	(1.040)	(0.995)	(0.989)	(1.032)	(1.026)	(0.991)
Size	-7.386***	-7.424***	-7.432***	-7.372***	-7.393***	-7.405***	-7.388***
	(-12.260)	(-12.525)	(-12.660)	(-12.273)	(-12.270)	(-12.300)	(-12.272)
Inverse Mills ratio	-23.080***	-23.191***	-23.216***	-23.041***	-23.098***	-23.125***	-23.077***
	(-13.573)	(-13.870)	(-14.016)	(-13.580)	(-13.590)	(-13.624)	(-13.578)
MEAS in Develop stage (H3)		0.065**					
		(2.778)					
MEAS in Initial Maturity stage (H3)			0.100***				
			(3.888)				
MEAS in Later Maturity stage(H3)				-0.098**			
				(-3.224)			
MEUAS in Develop stage (H4a)					-0.016		
					(-0.875)		
MEUAS in Initial Maturity stage (H4b)						-0.040*	
						(-2.092)	
MEUAS in Later Maturity stage (H4b)							0.066*
							(2.115)
Year fixed effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry fixed effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Intercept	204.608***	205.652***	205.762***	204.137***	204.836***	205.042***	204.356***
	(11.750)	(11.990)	(12.105)	(11.754)	(11.761)	(11.783)	(11.736)
N	2,848	2,848	2,848	2,848	2,848	2,848	2,848

Note: Robust t-statistics corrected for clustering at the firm level are presented in parentheses. MEAS = moderating effect of absorbed slack; MEUAS = moderating effect of unabsorbed slack. Significance level: † p < 0.1, * p < 0.05, ** p < 0.01, *** p < 0.001.

Table 1-8: Estimates for Heckman Second-Stage Models:

Regression of ROA on Donation with Different Lifecycle Dummy, and Firm, Sub-national, and Industry-level Controls

	Fixed Effect Regression						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Lagged ROA	0.152***	0.153***	0.150***	0.148***	0.151***	0.151***	0.152***
	(6.178)	(6.234)	(6.155)	(6.108)	(6.173)	(6.181)	(6.200)
Development stage (main regression): donation (H1)	-0.242*	-0.259**	-0.238*	-0.241*	-0.238*	-0.243*	-0.242*
	(-2.395)	(-2.625)	(-2.335)	(-2.397)	(-2.355)	(-2.403)	(-2.399)
Initial Maturity stage: donation*second life-cycle dummy (H2)	0.257*	0.262**	0.232*	0.258*	0.257*	0.268**	0.257*
	(2.540)	(2.627)	(2.259)	(2.553)	(2.540)	(2.650)	(2.541)
Later Maturity stage: donation*third life-cycle dummy (H2)	0.275**	0.277**	0.270*	0.312**	0.276**	0.274**	0.249*
	(2.650)	(2.700)	(2.580)	(2.965)	(2.662)	(2.646)	(2.373)
age	-0.560***	-0.542***	-0.540***	-0.575***	-0.561***	-0.559***	-0.553***
	(-3.404)	(-3.342)	(-3.352)	(-3.498)	(-3.411)	(-3.392)	(-3.355)
GDP Per Capita	3.279*	3.408*	3.418*	3.171*	3.273*	3.293*	3.327*
	(2.217)	(2.319)	(2.336)	(2.145)	(2.213)	(2.228)	(2.242)
Unabsorbed slack	0.627**	0.640**	0.638**	0.612**	0.692**	0.774**	0.552**
	(3.041)	(3.113)	(3.106)	(2.990)	(2.859)	(3.219)	(2.660)
Absorbed slack	-3.018***	-3.351***	-3.500***	-2.844***	-3.019***	-3.021***	-3.020***
	(-7.162)	(-7.585)	(-8.059)	(-6.749)	(-7.153)	(-7.148)	(-7.175)
Selling expense ratio	-4.764	-4.628	-4.715	-5.115	-4.819	-4.914	-4.756
	(-1.470)	(-1.450)	(-1.505)	(-1.582)	(-1.488)	(-1.525)	(-1.473)
Fixed asset ratio	3.253**	3.208**	3.193**	3.216**	3.251**	3.290**	3.311**
	(2.695)	(2.655)	(2.662)	(2.685)	(2.693)	(2.719)	(2.735)
Intangible asset ratio	1.704	1.863	2.026	1.708	1.69	1.695	1.769
	(0.554)	(0.604)	(0.659)	(0.566)	(0.549)	(0.551)	(0.575)
Debt ratio	-0.799	-0.792	-0.811	-0.793	-0.787	-0.778	-0.814
	(-0.534)	(-0.529)	(-0.544)	(-0.532)	(-0.527)	(-0.521)	(-0.545)
size	-4.673***	-4.693***	-4.705***	-4.672***	-4.682***	-4.706***	-4.685***

	(-7.310)	(-7.348)	(-7.384)	(-7.332)	(-7.286)	(-7.322)	(-7.350)
Inverse Mills Ratio	-16.281***	-16.334***	-16.379***	-16.293***	-16.292***	-16.325***	-16.295***
	(-9.922)	(-9.943)	(-9.981)	(-9.971)	(-9.917)	(-9.963)	(-9.941)
MEAS in the development stage (H3)		0.053*					
		-2.137					
MEAS in the initial maturity stage (H3)			0.098***				
			-3.622				
MEAS in the later maturity stage (H3)				-0.140**			
				(-3.056)			
MEUAS in the development stage (H4a)					-0.012		
					(-0.623)		
MEUAS in the initial maturity stage (H4a)						-0.035+	
						(-1.732)	
MEUAS in the later maturity stage (H4b)							0.061
							-1.625
Year Fixed Effect	yes	yes	yes	yes	yes	yes	yes
Industry Fixed Effect	-	-	-	-	-	-	-
Intercept	102.056***	101.083***	101.325***	103.396***	102.332***	102.668***	101.784***
	-4.505	-4.462	-4.479	-4.595	-4.5	-4.519	-4.494
N	2848	2848	2848	2848	2848	2848	2848
R Square	0.466	0.468	0.471	0.469	0.466	0.467	0.467
Adjusted R Square	0.462	0.464	0.467	0.465	0.462	0.463	0.463
rho	0.734	0.733	0.733	0.737	0.735	0.736	0.734
Log likelihood	-6597.39	-6592.56	-6583.25	-6587.92	-6597.1	-6595.26	-6594.86

Note: Robust t-statistics corrected for clustering at the firm level are presented in parentheses. MEAS represents the moderating effect of absorbed slack; MEUAS represents the moderating effect of unabsorbed slack. Significance level: † 0.1* 0.05 ** 0.01 *** 0.001.

Table 1-9: OLS regression and 2SLS regression of ROA on Donation with different lifecycle Dummy, and Firm, Sub-national, and Industry-Level Controls

OLS	OLS			2SLS							
				1st Stage	2nd Stage	1st Stage	2nd Stage		Moderating		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Lagged ROA	0.491***	0.425***	0.155***				0.660***	0.660***	0.660***	0.657***	0.657***
	(16.034)	(15.091)	(5.440)				(17.855)	(17.826)	(17.843)	(17.880)	(17.914)
Development stage (main regression): donation (H1)	-0.411**	-0.398**	-0.266*								
	(-2.919)	(-3.180)	(-2.209)								
Initial Maturity stage: donation*second life-cycle dummy (H2)	0.409**	0.401**	0.269*								
	(2.914)	(3.207)	(2.237)								
Later Maturity stage: donation*third life-cycle dummy (H2)	0.568***	0.542***	0.315*								
	(4.015)	(4.309)	(2.573)								
Development stage [Main regression]: DonationHet1 (H1)					-1.003***						
					(-5.394)						
Maturity stage: Main regression DonationHet1*2nd life-cycle Dummy (H2)					1.193***						
					(6.517)						
Development stage [Main regression]: DonationHet2 (H1)							-0.565*	-0.559*	-0.564*	-0.591*	-0.555*
							(-2.438)	(-2.413)	(-2.442)	(-2.561)	(-2.389)
Maturity stage: Main regression DonationHet2*2nd life-cycle Dummy (H2)							0.616**	0.617**	0.617**	0.622**	0.587*
							(2.697)	(2.697)	(2.690)	(2.733)	(2.541)
Lagged Donation				0.261***		0.274***					
				(11.617)		(10.786)					
CSR				0.060***		0.089***					
				(4.530)		(3.356)					
Lagged CSR						-0.029					
						(-1.048)					
State Dummy	-0.465**	-1.291***	-3.442***		-0.788***		-0.382*	-0.382*	-0.382*	-0.371*	-0.376*
	(-2.727)	(-7.121)	(-3.750)		(-3.444)		(-2.069)	(-2.065)	(-2.067)	(-2.000)	(-2.030)
Age	0.003	-0.083***		-0.061+	0.0350	-0.077*	0.0100	0.0100	0.0100	0.0100	0.0100
	(0.157)	(-4.995)		(-1.852)	(1.559)	(-2.115)	(0.593)	(0.596)	(0.594)	(0.575)	(0.554)
GDP Per Capita	0.642***	0.582***	3.414**	0.252	0.820***	0.638+	0.473*	0.467*	0.471*	0.474*	0.481*
	(3.664)	(3.559)	(3.074)	(0.721)	(3.417)	(1.668)	(2.444)	(2.440)	(2.459)	(2.449)	(2.478)

Unabsorbed slack	0.105	0.155		0.126	0.501*	0.223	-0.026	0.167	0.02	-0.034	-0.033
	(0.656)	(0.998)		(0.360)	(2.163)	(0.555)	(-0.149)	(0.381)	(0.044)	(-0.194)	(-0.190)
Absorbed slack	-1.262***	-1.491***		-0.556	-1.961***	-0.47	-1.085***	-1.084***	-1.085***	-1.728***	-1.715***
	(-7.625)	(-9.285)		(-1.625)	(-9.062)	(-1.234)	(-5.936)	(-5.932)	(-5.932)	(-3.828)	(-3.434)
Selling expense ratio	3.499***	0.398		1.426	5.961***	1.03	1.492+	1.514+	1.497+	1.500+	1.540+
	(4.453)	(0.479)		(0.852)	(4.970)	(0.578)	(1.776)	(1.789)	(1.769)	(1.780)	(1.824)
Fixed asset ratio	-2.141***	-1.394**		-0.53	-3.026***	0.024	-1.254*	-1.257*	-1.255*	-1.280*	-1.272*
	(-3.978)	(-2.833)		(-0.486)	(-4.068)	(0.019)	(-2.144)	(-2.147)	(-2.141)	(-2.187)	(-2.173)
Intangible asset ratio	-0.784	-0.634		1.565	-2.241*	2.584	-0.732	-0.737	-0.733	-0.752	-0.745
	(-0.954)	(-0.833)		(0.715)	(-2.162)	(1.040)	(-1.012)	(-1.019)	(-1.013)	(-1.037)	(-1.027)
Debt ratio	-1.737*	-3.048***		-5.853**	-2.955**	-6.116**	-0.923	-0.892	-0.915	-0.977	-0.983
	(-1.969)	(-3.731)		(-3.043)	(-2.623)	(-2.840)	(-0.855)	(-0.815)	(-0.836)	(-0.907)	(-0.913)
size	-0.144*	-1.468***		0.740***	-0.504***	0.724***	-0.224**	-0.226**	-0.224**	-0.241**	-0.242**
	(-2.525)	(-12.445)		(6.061)	(-5.585)	(5.189)	(-3.033)	(-3.062)	(-3.048)	(-3.251)	(-3.261)
Inverse Mills Ratio		-5.375***	-10.856***								
		(-11.914)	(-14.205)								
MEAS in Development Stage								-0.024			
								(-0.524)			
MEAS in maturity Stage									-0.006		
									(-0.120)		
MEUAS in Development Stage										0.083+	
										(1.877)	
MEUAS in maturity Stage											0.083
											(1.631)
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Intercept	-2.041	36.683***	-20.383	-22.046***	7.431*	-18.434***	1.76	1.791	1.767	2.187	2.12
	(-0.955)	(10.535)	(-1.628)	(-5.110)	(2.355)	(-3.824)	(0.660)	(0.675)	(0.666)	(0.842)	(0.811)
N	2832	2832	2832	1990	1990	1628	1628	1628	1628	1628	1628
R Square	0.5	0.55	0.7	0.26	0.27	0.25	0.61	0.61	0.61	0.61	0.61
Log Likelihood	-7553.74	-7388.89	-6822.01	-6498.01	-5524.84	-5322.88	-4007.83	-4007.7	-4007.82	-4005.93	-4005.82
Weak identification test (Cragg-Donald Wald F statistic)				88.241		52.127					

Sargan statistic (overidentification test of all instruments)	0.229 p=0.6324	0.839 p=0.6572
Endogeneity test of endogenous regressors:	8.091 p=0.0044	5.267 p=0.0217

Note: Robust t-statistics corrected for clustering at the firm level are presented in parentheses. MEAS represents the moderating effect of absorbed slack; MEUAS represents the moderating effect of unabsorbed slack. Significance level: † 0.1* 0.05 ** 0.01 *** 0.001.

Table 1-10: Regression of ROA on Donation with Different Lifecycle Dummy, and Firm, Sub-national, and Industry-level Controls by Propensity Score Matching

	Generalized Estimate Equation (GEE)					Fixed Effect Model (FE)				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Lagged ROA	0.024***	0.024***	0.023***	0.024***	0.024***	0.254***	0.251***	0.248***	0.254***	0.259***
	(7.068)	(7.076)	(7.077)	(7.074)	(7.257)	(5.636)	(5.619)	(5.471)	(5.676)	(5.860)
Development stage [Main regression]: Donation (H1)	-0.005+	-0.003	-0.004+	-0.004	-0.005+	-0.037*	-0.025+	-0.036*	-0.036*	-0.038*
	(-1.804)	(-1.091)	(-1.690)	(-1.283)	(-1.798)	(-2.483)	(-1.670)	(-2.378)	(-2.059)	(-2.532)
Maturity stage: Donation*second life-cycle Dummy (H2)	0.013***	0.013***	0.016***	0.013***	0.010*	0.102*	0.105*	0.139**	0.103*	0.061
	(3.443)	(3.485)	(4.230)	(3.509)	(2.323)	(2.432)	(2.487)	(2.905)	(2.394)	(1.112)
age	-0.016+	-0.016+	-0.012	-0.016+	-0.018*	0.251	0.237	0.23	0.251	0.269
	(-1.944)	(-1.863)	(-1.306)	(-1.915)	(-2.169)	(1.009)	(0.952)	(0.927)	(1.008)	(1.076)
GDP Per Capita	-0.187	-0.17	-0.17	-0.19	-0.192	5.223+	5.138+	5.000+	5.220+	5.387+
	(-1.198)	(-1.082)	(-1.068)	(-1.216)	(-1.239)	(1.873)	(1.846)	(1.799)	(1.868)	(1.926)
Unabsorbed Slack	0.115**	0.115**	0.118**	0.134*	0.083	0.577	0.579	0.571	0.601	0.399
	(2.626)	(2.634)	(2.593)	(2.109)	(1.588)	(1.540)	(1.539)	(1.516)	(1.413)	(1.142)
Absorbed Slack	-0.410***	-0.332***	-0.323***	-0.410***	-0.414***	-2.030***	-1.622**	-1.797***	-2.030***	-2.081***
	(-6.116)	(-4.426)	(-5.265)	(-6.083)	(-6.214)	(-4.085)	(-2.954)	(-3.764)	(-4.081)	(-4.161)
Selling expense ratio	-0.920*	-0.999*	-1.300**	-0.943*	-0.884+	-11.293*	-11.651*	-11.947**	-11.325*	-11.061*
	(-2.011)	(-2.143)	(-2.597)	(-2.049)	(-1.958)	(-2.544)	(-2.615)	(-2.648)	(-2.567)	(-2.548)
Fixed asset ratio	0.667*	0.679*	0.715*	0.668*	0.668*	3.552	3.619	3.641	3.546	3.71
	(2.327)	(2.370)	(2.513)	(2.317)	(2.350)	(1.290)	(1.317)	(1.318)	(1.285)	(1.333)
Intangible asset ratio	0.281	0.24	0.308	0.269	0.304	3.179	3.073	2.949	3.162	3.465
	(0.697)	(0.595)	(0.783)	(0.671)	(0.744)	(0.857)	(0.829)	(0.833)	(0.847)	(0.904)
Debt ratio	-0.337	-0.352	-0.241	-0.340	-0.339	1.349	1.431	1.469	1.348	1.336
	(-0.875)	(-0.914)	(-0.650)	(-0.878)	(-0.902)	(0.529)	(0.566)	(0.575)	(0.528)	(0.524)
size	-0.327***	-0.334***	-0.364***	-0.327***	-0.330***	-2.845***	-2.840***	-2.845***	-2.849***	-2.870***
	(-6.103)	(-6.524)	(-6.960)	(-6.109)	(-6.167)	(-3.922)	(-3.917)	(-3.915)	(-3.959)	(-3.910)
Inverse Mills Ratio	-1.992***	-1.992***	-2.113***	-1.997***	-1.997***	-17.440***	-17.545***	-17.471***	-17.440***	-17.513***

	(-5.445)	(-5.672)	(-5.934)	(-5.504)	(-5.388)	(-4.564)	(-4.582)	(-4.563)	(-4.560)	(-4.559)
MEAS in Development stage (H3)		-0.010+					-0.051			
		(-1.870)					(-1.465)			
MEAS in maturity stage (H3)			-0.026**					-0.158**		
			(-3.064)					(-3.173)		
MEUAS in Development stage (H4a)				-0.002					-0.003	
				(-0.381)					(-0.083)	
MEUAS in maturity stage (H4b)					0.005					0.095
					(0.989)					(1.390)
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Intercept	12.686***	12.669***	13.466***	12.714***	12.837***	20.488	21.424	23.137	20.603	19.125
	(6.252)	(6.259)	(6.862)	(6.258)	(6.363)	(0.558)	(0.582)	(0.631)	(0.559)	(0.524)
N	824	824	824	824	824	824	824	824	824	824
R Square						0.46	0.46	0.47	0.46	0.47
Adjusted R Square						0.45	0.45	0.46	0.45	0.45
rho						0.77	0.77	0.77	0.77	0.77
Log-Likelihood						-1820.74	-1819.04	-1815.54	-1820.73	-1817.5

Note: Robust t-statistics corrected for clustering at the firm level are presented in parentheses. MEAS represents the moderating effect of absorbed slack; MEUAS represents the moderating effect of unabsorbed slack. Significance level: † 0.1* 0.05 ** 0.01 *** 0.001.

Table 1-11: Estimates for Heckman Second-stage Models:
Regression of EBITDA Ratio on Donation with Different Life-cycle Dummies, and Firm, Subnational, and Industry-Level Controls

	Generalized estimating equation (GEE)				
	(1)	(2)	(3)	(4)	(5)
Lagged EBITDA ratio	0.0001***	0.0001***	0.0001***	0.0001***	0.0001***
	(19.697)	(19.701)	(19.468)	(19.516)	(19.110)
Development stage [Main regression]: Donation (H1)	-0.0047***	-0.0050***	-0.0045***	-0.0044***	-0.0046***
	(-3.812)	(-4.203)	(-3.675)	(-3.641)	(-3.771)
Maturity stage: Donation*second stage life-cycle dummy (H1)	0.0054***	0.0055***	0.0048***	0.0054***	0.0056***
	(4.369)	(4.458)	(3.851)	(4.407)	(4.454)
Age	-0.0038*	-0.0039*	-0.0038*	-0.0038*	-0.0038*
	(-2.419)	(-2.444)	(-2.439)	(-2.415)	(-2.414)
GDP per capita	0.0127	0.0131	0.0131	0.0123	0.0122
	(0.786)	(0.809)	(0.805)	(0.754)	(0.751)
State dummy	-0.0504**	-0.0502**	-0.0504**	-0.0504**	-0.0505**
	(-3.082)	(-3.075)	(-3.086)	(-3.086)	(-3.087)
Unabsorbed slack	0.0057	0.0061	0.0062	0.0112	0.0116
	(0.585)	(0.624)	(0.630)	(1.051)	(1.111)
Absorbed slack	-0.0606***	-0.0680***	-0.0702***	-0.0608***	-0.0609***
	(-4.966)	(-4.710)	(-4.936)	(-4.991)	(-5.000)
Selling expense ratio	-0.0605	-0.0592	-0.0572	-0.0633	-0.0636
	(-0.509)	(-0.501)	(-0.486)	(-0.533)	(-0.536)
Fixed asset ratio	0.0178	0.0178	0.0186	0.0178	0.0182
	(0.471)	(0.468)	(0.491)	(0.470)	(0.481)
Intangible asset ratio	0.106	0.1094	0.1106	0.1058	0.1059
	(0.959)	(0.983)	(0.994)	(0.956)	(0.957)
Debt ratio	0.1716*	0.1723*	0.1721*	0.1720**	0.1718**
	(2.572)	(2.568)	(2.568)	(2.580)	(2.577)
Size	-0.1093***	-0.1099***	-0.1103***	-0.1098***	-0.1100***
	(-5.089)	(-5.150)	(-5.174)	(-5.125)	(-5.137)
Inverse Mills ratio	-0.3857***	-0.3878***	-0.3887***	-0.3870***	-0.3873***
	(-6.134)	(-6.206)	(-6.236)	(-6.166)	(-6.175)
MEAS in Develop stage		0.0012			
		(1.294)			
MEAS in Maturity stage			0.0017+		

			(1.862)		
MEUAS in Develop stage				-0.001	
				(-1.343)	
MEUAS in Maturity stage					-0.0011
					(-1.482)
Industry fixed effect	Yes	Yes	Yes	Yes	Yes
Year fixed effect	Yes	Yes	Yes	Yes	Yes
Intercept	3.0824***	3.0992***	3.1088***	3.0998***	3.1040***
	(4.926)	(4.985)	(5.011)	(4.957)	(4.968)
N	2848	2848	2848	2848	2848

Note: Robust t-statistics corrected for clustering at the firm level are presented in parentheses. MEAS represents the moderating effect of absorbed slack; MEUAS represents the moderating effect of unabsorbed slack. EBIDTA ratio represents the earnings before interest, tax, depreciation, and amortization, scaled by the total asset. Significance level: † 0.1* 0.05 ** 0.01 *** 0.001.

Table 1-12: Estimates for Heckman Second-Stage Models:
Regression of EBITDA Ratio on Donation With Different Lifecycle Dummy, and Firm, Sub-national Controls

	Fixed effect model				
	(1)	(2)	(3)	(4)	(5)
Lagged EBITDA rate	0.0001***	0.0001***	0.0001***	0.0001***	0.0001***
	(19.210)	(19.221)	(19.074)	(19.001)	(18.511)
Development stage [Main regression]: Donation (H1)	-0.0045***	-0.0049***	-0.0044***	-0.0043***	-0.0044***
	(-3.729)	(-4.108)	(-3.618)	(-3.602)	(-3.708)
Maturity stage: Donation*second stage life-cycle dummy (H1)	0.0051***	0.0052***	0.0047***	0.0052***	0.0054***
	(4.216)	(4.311)	(3.755)	(4.243)	(4.255)
Age	-0.004	-0.0037	-0.0037	-0.0041	-0.0041
	(-0.599)	(-0.551)	(-0.550)	(-0.613)	(-0.616)
GDP per capita	0.1225+	0.1248*	0.1247*	0.1217+	0.1216+
	(1.963)	(1.991)	(1.995)	(1.947)	(1.946)
Unabsorbed slack	0.0079	0.0081	0.0082	0.013	0.0132
	(0.777)	(0.801)	(0.804)	(1.188)	(1.225)
Absorbed slack	-0.0548***	-0.0610***	-0.0631***	-0.0548***	-0.0548***
	(-4.349)	(-4.211)	(-4.421)	(-4.344)	(-4.346)
Selling expense ratio	-0.0936	-0.0908	-0.0887	-0.0975	-0.0975
	(-0.548)	(-0.535)	(-0.525)	(-0.572)	(-0.572)
Fixed asset ratio	0.058	0.057	0.0577	0.0579	0.0584
	(1.253)	(1.231)	(1.238)	(1.250)	(1.264)
Intangible asset ratio	-0.0409	-0.038	-0.0377	-0.0421	-0.0421
	(-0.300)	(-0.278)	(-0.276)	(-0.309)	(-0.309)
Debt ratio	0.1265	0.1267	0.1264	0.1272	0.1271
	(1.635)	(1.631)	(1.626)	(1.644)	(1.643)
Size	-0.0379+	-0.0382+	-0.0383+	-0.0387+	-0.0387+
	(-1.799)	(-1.817)	(-1.824)	(-1.833)	(-1.836)
Inverse Mills ratio	-0.2764***	-0.2773***	-0.2775***	-0.2774***	-0.2777***
	(-6.001)	(-6.038)	(-6.054)	(-6.011)	(-6.014)
MEAS in Develop stage		0.001			
		(1.076)			

MEAS in Maturity stage			0.0015		
			(1.604)		
MEUAS in Develop stage				-0.0009	
				(-1.214)	
MEUAS in Maturity stage					-0.001
					(-1.282)
Industry fixed effect					
Year fixed effect					
Intercept	0.1258	0.1068	0.1114	0.1533	0.1561
	(0.142)	(0.120)	(0.125)	(0.171)	(0.175)
N	2848	2848	2848	2848	2848
R Square	0.15	0.15	0.15	0.15	0.15
Adjusted R Square	0.14	0.14	0.14	0.14	0.14
rho	0.77	0.77	0.77	0.77	0.77
Log Likelihood	2693.41	2694.55	2695.86	2694.63	2694.81

Note: Robust t-statistics corrected for clustering at the firm level are presented in parentheses. MEAS represents the moderating effect of absorbed slack; MEUAS represents the moderating effect of unabsorbed slack. EBIDTA ratio represents the earnings before interest, tax, depreciation, and amortization, scaled by the total asset. Significance level: † 0.1* 0.05 ** 0.01 *** 0.001.

Figure 1-1: Theoretical Framework

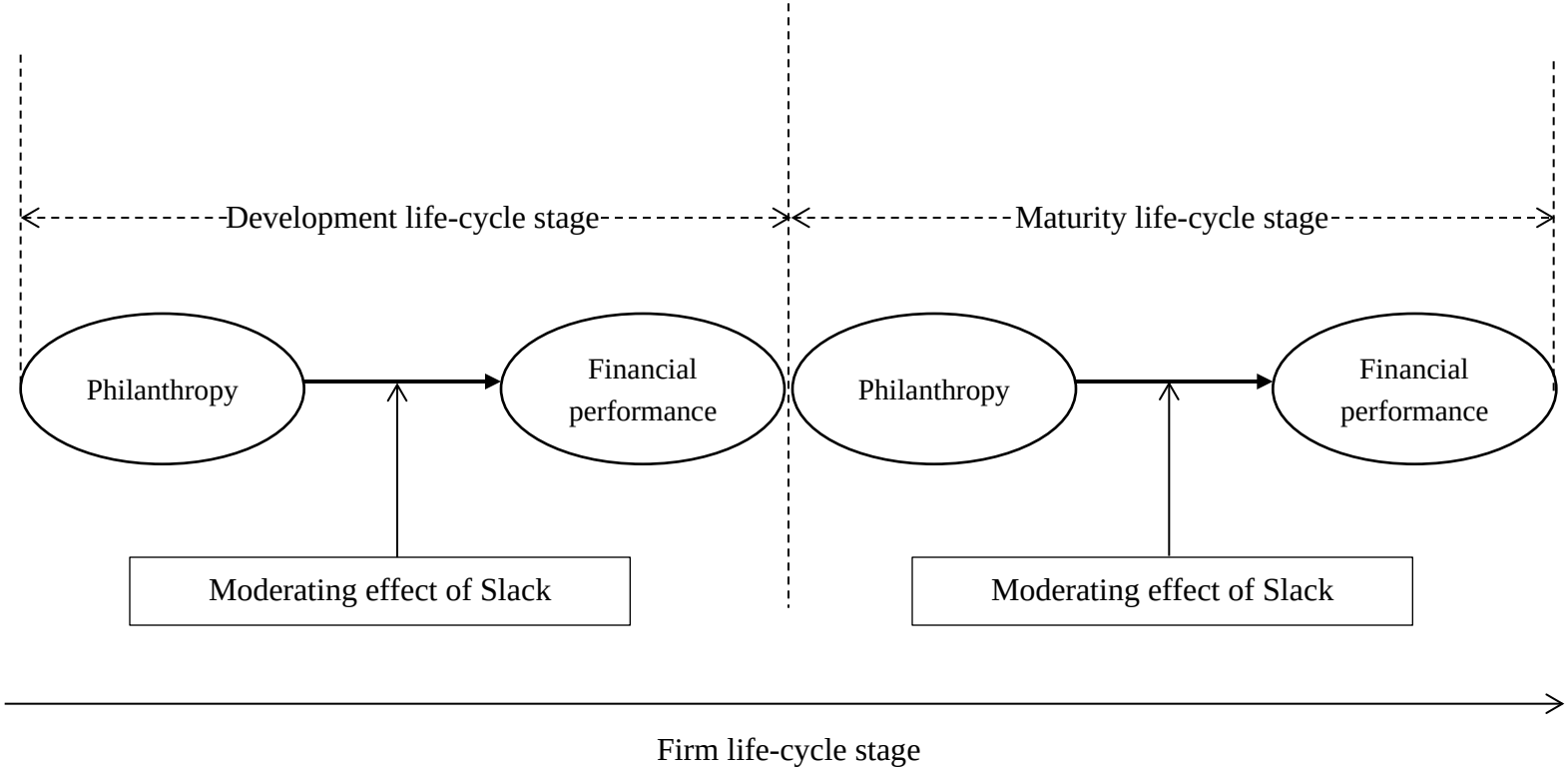


Figure 1-2: CP–CFP Relationship in Different Life-cycle Stages

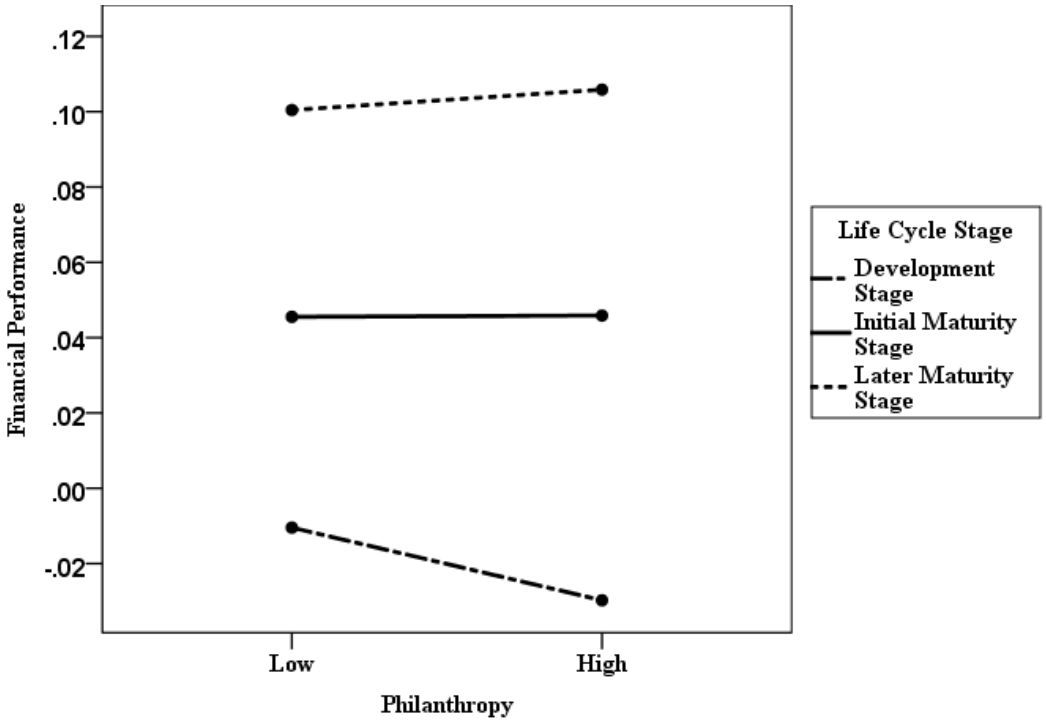


Figure 1-3: Interaction Effect of Absorbed Slack and CP on CFP in Development Life-cycle Stage

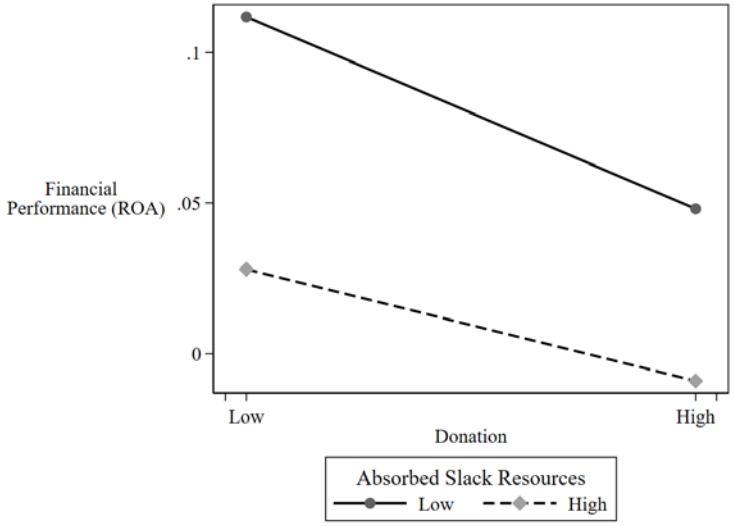


Figure 1-4: Interaction Effect of Absorbed Slack and CP on CFP in Initial Maturity (Later Maturity) Life-cycle Stage

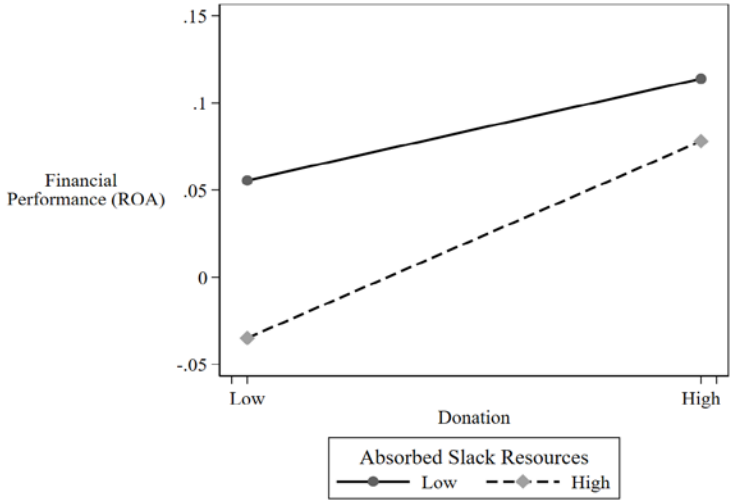


Figure 1-5: Interaction effect of Absorbed Slack and CP on CFP in Initial Maturity (Later Maturity) Life-cycle Stage

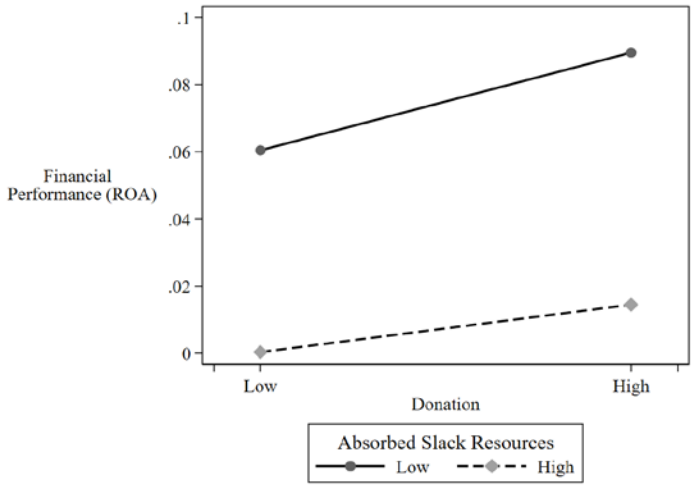


Figure 1-6: Interaction Effect of Unabsorbed Slack and CP on CFP in Initial Maturity (Later Maturity) life-cycle Stage

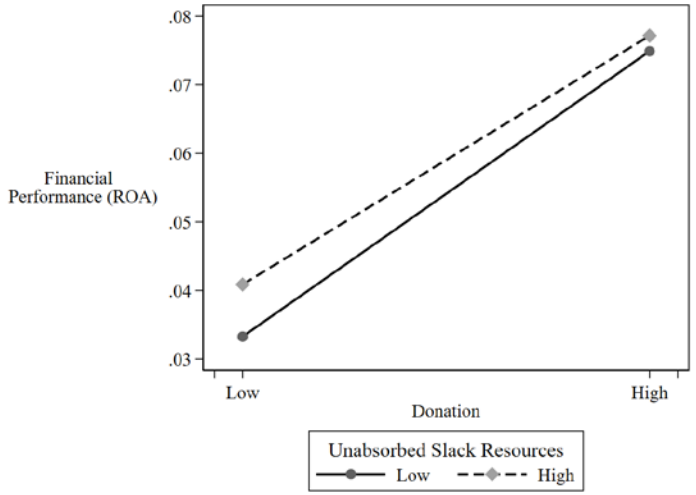
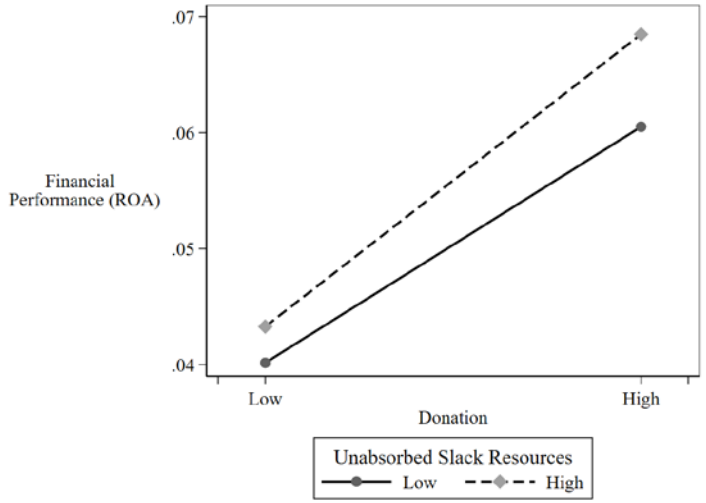


Figure 1-7: Interaction Effect of Unabsorbed Slack and CP on CFP in Initial Maturity (Later Maturity) life-cycle Stage



Appendix: Identification of the number of Thresholds, Calculation of Threshold Value, and Figure of LR Statistics (threshold point is where LR statistics reach zero)

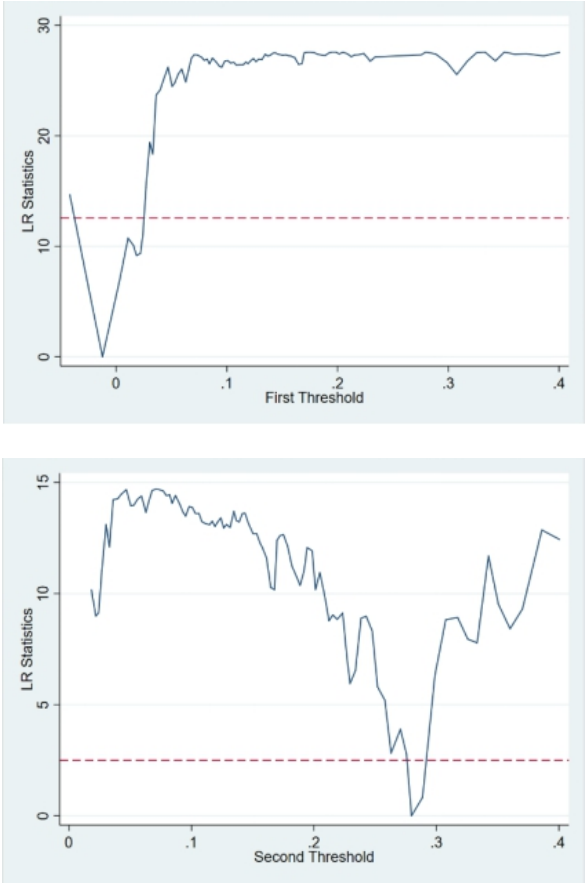
Appendix table 1-1: Test the Number of Thresholds

Test from threshold effects	(bootstrap=1000 1000 1000):
Test for single threshold	
F1	31.28
P-value	0.000
(10%, 5%, 1% critical values)	(12.1792 14.7734 19.5305)
Test for double threshold	
F2	15.11
P-value	0.0850
(10%, 5%, 1% critical values)	(14.4020 19.7757 34.8518)
Test for triple threshold	
F3	3.20
P-value	0.8550
(10%, 5%, 1% critical values)	(16.3430 20.8409 29.9912)

Appendix table 1-2: Calculation of Threshold Value

Threshold estimates	(level = 95%):	
	Estimate	95% confidence interval
$\gamma\hat{}1$	-0.0124	[-0.0419 0.0029]
$\gamma\hat{}2$	0.2796	[0.2616 0.2886]

Appendix figure1-1: Threshold Identification Process from LR Statistics



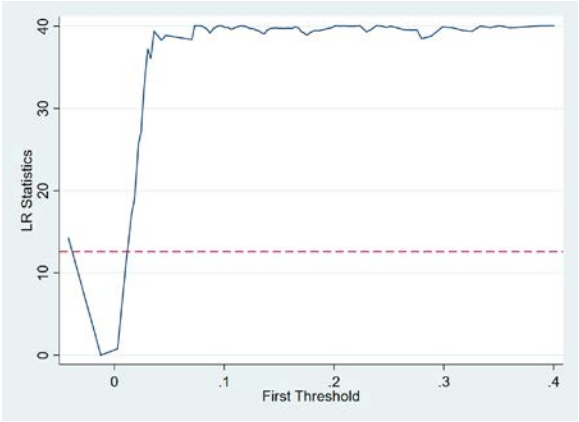
Appendix table 1-3: Test the number of Thresholds in 2sls Regression

Test from threshold effects	(bootstrap=1000 1000):
Test for single threshold	
F1	35.28
P-value	0.000
(10%, 5%, 1% critical values)	(13.5045 17.1123 24.3496)
Test for double threshold	
F2	4.92
P-value	0.6570
(10%, 5%, 1% critical values)	(14.9327 20.4055 33.4951)

Appendix table 1-4: Calculation of Threshold Value in 2sls Regression

Threshold estimates	(level = 95%):	
	Estimate	95% confidence interval
γˆ1	-0.0124	[-0.0419 0.0029]

Appendix figure 1-2: Threshold Identification Process from LR Statistics in 2SLS Regression



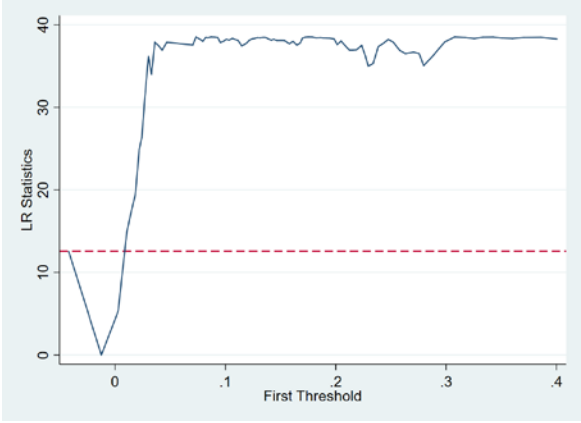
Appendix table 1-5: Test the Number of Thresholds in PSM Sample

Test from threshold effects	(bootstrap=1000 1000):
Test for single threshold	
F1	34.64
P-value	0.000
(10%, 5%, 1% critical values)	(14.1099 16.9992 24.7100)
Test for double threshold	
F2	11.69
P-value	0.1980
(10%, 5%, 1% critical values)	(16.6857 23.7137 35.3188)

Appendix table 1-6: Calculation of Threshold Value in PSM Sample

Threshold estimates	(level = 95%):	
	Estimate	95% confidence interval
γˆ1	-0.0124	[-0.0419 0.0029]

Appendix figure 1-3: Threshold Identification Process from LR Statistics in PSM Sample



CHAPTER2: Will engaging in CSR make investors more attractive? The role of CSR in firms' investment

ABSTRACT

This study investigates how companies' corporate social responsibility (CSR) affects their investment behavior. Different from prior studies that mainly focus on the firms' financial factors, we focus on the importance of the potential investment opportunities granted from investment targets on firms' investment expenditure. Based on information asymmetry and stakeholder perspective, we argue that through engaging in CSR activities, firms can increase information disclosure and information accuracy, which could build up a trustful relationship with potential investment targets, so that firms can secure more investment opportunities leading to more investment expenditure. Further, accepting that information asymmetry level varies under different industries, we also examine how information asymmetry affects CSR–investment relationship. Using generalized estimating equation (GEE) modeling on a sample of Chinese listed firms from 2009 to 2015, we indeed find a significant positive relationship between CSR and investment through the mediating effect of investment opportunities. We also find a positive moderating effect of information asymmetry level on this relationship. Our results are robust under different models after controlling for endogeneity.

Keywords: CSR, investment opportunity, investment expenditure, information asymmetry

INTRODUCTION

Corporate investment has become a key component of economic growth (Gulen and Ion 2015) and one of the most significant factors that contribute to firm valuation (Chen, Xie, and Zhang 2017). Concerns about the firm's investment behavior have grown to become a critical issue over the past several decades since the seminal work of Fazzari, Hubbard, Petersen (1988), who demonstrate that it is the financial status that determines firm-level investment. Following this study, scholars find various channels that improve investment through affecting firm's financial constraints, such as firm's asset tangibility (Almeida and Campello 2007), financial structure flexibility (Gilchrist, Sim, and Zakrajšek 2014), or external analysts' forecasting (Chen et al., 2017). However, we should notice that investment behavior involves two parties, investors and investment targets, which both determine a successful investment project, that lacking any of one party will lead to a failed investment or a more extended period of deal completion (Deng, Kang, and Low 2013; Hawn 2016). It is thus not only the investors' financial status but also the investment targets' willingness to accept potential investors that determine a successful investment (Deng, Kang, and Low 2013; Samuelson 1985). Different from prior literature that takes a passive attitude toward investment targets, we posit that investment targets will also determine the investment by selecting appropriate cooperators (investors). Facing with a sound investment project, many potential investors will compete for the same investment opportunity (Flammer 2018), making the investment targets a significant role in choosing potential investors and granting investment opportunities to them.

Facing with unknown potential investors who want to bid for the same investment opportunity, investment targets may become tentative in choosing appropriate investors or even feel suspicious to those unfamiliar ones with a higher level of information asymmetry, which will lead to a delayed or unsuccessful

investment (Dixit and Pindyck 1994; Hawn 2016; Li, Li, and Wang 2019; McDonald and Siegel 1986). Indeed, investors' information asymmetry may come from information incomprehensiveness and the lack of information accuracy (Healy and Palepu 2001; Lambert, Leuz, and Verrecchia 2007). For example, some investors may deliberately hide information to keep organizational flexibility or prevent information leakage and public scrutiny (Bajari and Tadelis 2001). Besides, some information intermediaries such as financial auditing firms may provide overly optimistic information or provide biased information that is influenced by their own experiences and capabilities (Brown, Foster, and Noreen 1985; Jacob, Lys, and Neale 1999). Even some investors hide their private information for the sake of maintaining their competitive advantages in the market (Darrough 1993) or pursuing their private interests (DeFond and Jiambalvo 1994; Efendi, Srivastava, and Swanson 2007). All the above mechanisms will significantly deteriorate the information environment and impede the active information exchange between investment targets and investors (Lambert et al. 2007). As the information exchange between investors and investment targets becomes difficult, investment targets may negatively evaluate potential investors, which in turn affects the relationship between investment targets and investors (Cohen and Dean 2005).

Given that a trustful relationship between investment targets and investors is an essential factor for investors to get successful investment opportunities from investment targets (Jones 1995), how to build a strengthened relationship between them is of great importance. CSR, a trustful signal to reduce information asymmetry through improving information disclosure and information accuracy, will help investors reduce their information asymmetry and build a better relationship with investment targets (Deng et al. 2013; Flammer 2018; Su, Peng, Tan, and Cheung 2016). Therefore, we argue that engaging in CSR activities would help investors achieve a higher level of investment opportunities, a prerequisite factor to promote a

firm's investment expenditure (Hayashi 1982; Tobin 1969).

We further examine our proposed mechanism for firms in industries with different levels of information asymmetry as we argued that CSR activities alleviate the information asymmetry between investors and investment targets and help investors achieve more investment opportunities from investment targets, which further promote the level of investment expenditure. We can predict that in industries with a lower level of information asymmetry, investment targets can get more information with a higher level of accuracy and comprehensiveness, the effect of engaging in CSR activities for reducing information asymmetry will thus reduce. In order to better depict this mechanism, we investigate the moderating effect of the industry information-asymmetry level.

[Insert Figure 2-1 about here]

To investigate the impact of CSR on investment expenditure through the mechanisms of gaining investment opportunities benefited from the reduced level of information asymmetry, we use a panel dataset from CSMAR for Chinese publicly listed companies from 2009-2015 in both Shanghai and Shenzhen exchange. We believe Chinese market is an appropriate context for our study, as information asymmetry issue ubiquitously exists in the emerging Chinese market, which has significant impacts on firm's various aspects (Mok and Hui 1998; Su and Fleisher 2005), including the investment. Besides, the recent fast growth in the Chinese economy, especially in firm investment behavior, also makes the investigation of firm investment behavior very relevant.

We make several contributions to current literature. First, we broaden the previous literature in corporate investment by taking an information asymmetry perspective and showing that a firm's investment is not only determined by investors' financing status, such as the capability to raise debt or equity, but also

by the investment targets' willingness to accept the investors. Facing the open-bidding competition with other firms, attitudes toward potential investors seems of paramount importance in winning the investment opportunities (Samuelson 1985). It is thus clear that the ability to get investment opportunities from investment targets plays a vital role in a firm's investment behavior. Besides, by incorporating the information asymmetry into CSR–investment relationship, we empirically add to the traditional view of investment opportunity–investment expenditure relationship by showing that CSR is an antecedent of achieving more investment opportunities, which in turn, help firm achieve a higher level of investment expenditures. Second, we take an integrated information asymmetry and stakeholder perspective by showing that engaging in CSR activities can attenuate the information asymmetry issue between the firms (investors) and stakeholders (investment targets), which is an essential factor in improving investment expenditures through grasping more investment opportunities from stakeholders (investment targets). Third, we are the first to incorporate information asymmetry into CSR–investment literature empirically. Different from previous studies, which assume that a firm's investment behavior will be affected by information asymmetry (Benlemlih and Bitar 2018; Chen et al. 2017), we empirically measure the information asymmetry and test the moderating effect of information asymmetry on CSR–investment relationship.

The remainder of the paper is structured as follows. We first briefly review investment literature in previous studies. We continue our discussion by developing the critical theoretical underpinnings that formed the basis for our hypotheses. We then present the methodological considerations, along with the analysis of the data used to test the hypotheses. A description of the study findings and their interpretation follow, along with a discussion of our contribution to theory and practice.

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Information asymmetry between investor and investment target

Prior studies have mainly focused on financial constraints and investigated how firms' internal factors such as asset tangibility (Almeida and Campello 2007), asset re-deployability (Kim and Kung 2016), and hedging method (Doshi, Kumar, and Yerramilli 2017) help firms increase their investment expenditure. Different from a previous internal-focused perspective, external acceptance, such as investment targets' attitude toward external investors, is also an essential factor in determining a successful transaction between investment parties (Choi, Petra, and Guar 2015; Deng, Kang, and Low 2013; Hawn 2013).

The relationship between investment targets and investors will seriously deteriorate if the information could not fully exchange between them (Myllykangas, Kujala, and Lehtimäki 2010). As noted by Flammer (2018), the level of information asymmetry impedes effective communication between investment parties, which finally undermine the probability of successful transactions. Within an investment relationship, the lack of information about investors negatively impacts the trustworthiness that can be felt by the investment targets. In some extreme situations, investment targets may be cautious or even skeptical toward the tendency or motivation of investors due to the issue of information asymmetry (Li et al. 2019), which eventually leads to transaction costs caused by incomplete contracting (Williamson 1985). Such incomplete contracting may also hinder investment target the process of negotiation with investors (Bajari, Houghton, and Tadelis 2014).

Indeed, Li, Nan, and Zhao (2018) highlight the importance of information in helping acquirer to achieve acquisition efficiency. Similarly, more information held by the bidder will more likely lead to acquisition return that benefits the acquirer in the acquisition process (Dionne, La Haye, & Bergerès, 2015). Furthermore, the negotiating process between bidder and target promotes the process of "favorable selection"

and value-enhancing, which will likely help bidder overcome asymmetric uncertainty in terms of target firms' information and eventually promote the acquisition efficiency (Raman, Shivakumar, & Tamayo, 2013). In other words, how to get to know investment parties, to some extent, determines whether a successful investment relationship can be successfully attained (Jones 1995).

The extent to which a trustful relationship can be built also depends on how much authentic and transparent information shares between parties (Myllykangas et al. 2010). Within an investment relationship, the lack of information accuracy of investors negatively impacts the cost of capital (Lambert et al. 2011). Therefore, how to reduce the information asymmetry through lowering information inaccuracy becomes a critical issue in reaching a successful investment relationship.

The extent to which a trustful relationship may build between investment targets and investors also depends on how much authentic and transparent information shares between parties (Myllykangas et al. 2010). Within an investment relationship, the lack of information accuracy of investors negatively impacts the cost of capital (Lambert et al. 2011). Therefore, how to reduce the information asymmetry through lowering information inaccuracy becomes a critical issue in reaching a successful investment relationship.

The inefficient financial intermediary agency

Information asymmetry, on the one hand, caused by inefficient financial intermediaries, lead to information inaccuracy and information incomprehensiveness (Lambert, Leuz, and Verrecchia 2011). Acting as the financial information disclosure agencies, financial intermediaries such as auditing firms and financial analysts play an essential role in reducing market information asymmetry through disclosing firms' comprehensive information (Anderson, Duru, and Reeb 2009; Healy and Palepu 2001; Wang, Cao, and Ye 2018). If the information intermediaries can actively transmit information between investors and investment

targets, investment targets will make timely judgments about potential investors who want to bid for a project, and investment efficiency will attain.

However, the inefficiencies of auditing firms may sometimes report biased information, which is in line with their managers' interests. As a result, they may misguide outside information users, for example, investment targets (Watts and Zimmerman 1981). At the same time, auditing firms may even lobby for reducing the standards of financial reporting for their private interests even though such reduction may at the risk of increasing the information uncertainties and inaccuracies (Healy and Palepu 2001). Besides, financial analysts, acting as another group of financial intermediaries, also have the drawbacks of providing overly optimistic information[9] due to their innate capability or experience insufficiency.[10] Therefore, information comprehensiveness and accuracy will likely undermine.

The intentional information-hiding behavior

Information asymmetry can also be caused by information-hiding behavior (Healy and Palepu 2001) that leads to symbolic information reporting or the paucity of information. Compared with investment targets, investors who take charge of the projects are at the best understanding of the project's intrinsic valuation. On the one hand, investors do not want to fully disclose their core information due to the concern of losing a competitive position within the market (Anand and Rosen 2008; Gigler, 1994; Sutton and Callahan 1987). More importantly, under the imperfect auditing and accounting environments with inefficient financial intermediaries, it becomes easier for investors to conceal information by making

[9] For example, the analysts' recommendations always tend to be "buys" suggestions (Brown et al. 1985).

[10] As Jacob et al. (1999) suggest, analysts' innate ability, company assignments, brokerage affiliation, and industry specialization are likely to affect their information forecasts accuracy.

symbolic reporting (Sims and Brinkmann 2003). Because of these "junk" information, investment targets may be confused and could not distinguish the right investors from bad ones. Since the information provided by those "bad" investors under ambiguous information environment tries to claim themselves as qualified as those "good" investors (Akerlof 1970), investment targets will find it even more challenging to make an unbiased selection. Failure to access accurate information of potential investors from investors' reported information makes investment targets extremely difficult to understand investors. Such information paucity concerning investors will, in turn, cause investment targets to take a suspicious attitude toward all investors in the market and delay their decision making. As a result, for those qualified investors, they are thus likely to be, unfortunately, "squeezed out" even though they are qualified to do so (Fazzari et al. 1988).

After investment targets launch an investment project, they do not play an active role in supervising or controlling project progression, which makes investors who hold more critical information about projects easier to exploit the value from investment targets (Jensen and Meckling 1976). Considering the above two factors, investment targets which are at information disadvantageous position are less likely to publish project-biding information and more likely to delay the bidding process (Dixit and Pindyck 1994; McDonald and Siegel 1986) until they sufficiently believe that potential investors are "trustful enough" to take the objective project.

Investors' information hiding behavior not only impact investment targets' attitude toward investors but also prevent investors from making sufficient investment due to the difficulty of raising sufficient capital from outside capital holders (Fazzari et al. 1988; Myers and Majluf 1984). Due to the severe ambiguity of information environment perceived by outside capital providers, they may deliberately eschew from

providing capital, or they may overly increase their required rate of return to compensate the perceive potential risks (Myers and Majluf 1984). Therefore, the difficulty of raising funding from outside capital holders may also force investment targets to forego many meaningful investment projects reluctantly.

According to the above arguments, information asymmetry caused by inefficient financial intermediaries and information hiding behavior will not only lead to information inaccuracy but also information incomprehensiveness. Given the information asymmetry problems identified above, we argue that CSR, acting as a way to signal the firms' integrity and sincerity (Carroll 1979; Cuypers, Koh, and Wang 2015; Jones 1995), will lower the potential information inaccuracy and mitigate firms' information-hiding behavior through cultivating a more ethical-oriented sense of doing business (Kim, Park, and Wier 2012).

CSR as the role of reducing information asymmetry

CSR is viewed as the firm's voluntary activities to serve employees, environments, and communities in ways that go beyond financial, technical, or legal requirements (Mcwilliams and Siegel 2001). Firms with CSR activities are more likely to act honestly, trustworthy, and ethically (Carroll 1979; Jones 1995; Mellahi, Frynas, Sun, and Siegel 2016). Besides, CSR also helps promote non-financial information disclosure, which helps more stakeholders know more about a firm and make rational decisions (Dhaliwal, Li, Tsang, and Yang 2014). Here, we specifically argue two mechanisms of CSR in solving firms' information asymmetry: improving information accuracy (Kim et al. 2012) and information disclosure (Cui, Jo, and Na 2018).

CSR and information disclosure

CSR will lower the level of information asymmetry between investment targets and investors through disclosing more non-financial information and promoting more frequent communication between firms and

stakeholders (i.e., investors and investment targets) (Freeman 1984). As we argued before, CSR reporting, such as environmental protection, employee welfare, and charitable donation, are firms' non-financial information that is not required in the financial statement. However, this information contains the critical implications for investment targets to make inferences about potential investors (Dhaliwal, Radhakrishnan, Tsang, Yang 2012). For example, CSR activities may disclose much information regarding firms' several aspects, such as corporate governance, investor relations, creditor relations, and employee relations. Therefore, it becomes easier for outsiders such as investment targets to approximately gauge the firms' effectiveness of internal governance or authenticity of the state of operation from information contained in CSR reports such as customers' satisfaction and supplier collaboration relationship (Wang et al. 2018).

Moreover, CSR activities can also promote frequent interactions between investment targets and investors, a way in which investment targets could get more information from potential investors and solve the possible conflicts between them (Freeman 1984; Jo and Harjoto 2011, 2012). As CSR activities may link investment targets with investors through some third-party social activities, investment targets may garner some private information of potential investors, which may not be available in formal disclosure.[11] These socially interactive activities will help investment targets discover more information about investors and reinforce the trustful relationship between them, which will benefit their future collaboration (Flammer, 2018).

[11] For example, LOTTO, Germany's biggest lottery, the main sponsor of Rheingau Musik Festival, one of Germany's major classical music festivals, displays their firms' logos prominently on all festival publications and at concert locations. LOTTO, therefore, markets itself through such socially responsible behavior in the music festival. Other hotel companies offer guests rooms free of charge in a way that may also promote their services and brand names in the market (Bruch 2005).

CSR and information accuracy

Firms' CSR activities send a signal to investors that they are "good citizens" with a higher level of ethical concern and reputation (Albinger and Freeman 2000; Greening and Turban 2000; Turban and Greening 1997). Being known as socially responsible actors helps stakeholders positively evaluate firms as non-opportunistic business collaborators with long-term orientation (Eccles, Ioannou, and Serafeim 2014; Caroline Flammer and Bansal 2017). According to Phillips, Freeman, and Wicks (2003), the socially responsible firms should obey the principle of doing the "right things" and contribute to society by doing what is "ethically correct." Also, firms' CSR activity is the reciprocal behavior that aims at benefiting society in which they depend on (Agle, Mitchell, and Sonnenfeld 1999; Wood 1991). Such reciprocal nature of CSR makes managers feel that it is a moral imperative to be "honest, trust, and ethical" (Donaldson and Preston 1995; Jones 1995). Hence, investors under this moral requirement should report more accurate information and constrain earnings management in order to keep high information quality (Chih, Shen, and Kang 2008; Kim et al. 2012; Wang et al. 2018). In this vein, CSR is an efficient information tool to signal their information quality and disclosure (Diamond and Verrecchia 1991; Lambert et al. 2007) in the eyes of investment targets.

CSR reporting also serves as a supervisory function to guarantee the firms' information accuracy. Managers under different situations[12] CSR reporting also serves as a supervisory function to guarantee the firms' information accuracy. Managers under different situations want to disguise financial reporting to

[12] Some managers illegally manage earnings to boost their private compensation by shifting earnings to raise stock prices during or before stock option exercising periods (Efendi et al, 2007); or they manage earnings to avoid violating debt covenants (DeFond and Jiambalvo, 1994).

maintain or improve their private interests (Bergstresser and Philippon 2006; Burns and Kedia 2006; Efendi et al. 2007). As we argued before, CSR will disclose much information that is available for investment targets to make appropriate inferences (Wang et al. 2018). Therefore, the increased availability of information from CSR will constrain the investors' tendency to manipulate and disguise information.[13]

CSR activities provide firms with a higher level of reputation (Albinger and Freeman 2000; Brammer and Pavelin 2006; Elfenbein, Fisman, and McManus 2012; Turban and Greening 1997) which guarantee the firm information quality (Hong and Kacperczyk 2009; Ioannou and Serafeim 2015; Luo, Wang, Raithel, and Zheng 2015). On the one hand, enjoying a higher level of reputation improves firms' social image and publicity (Brown and Dacin 1997). Such social image and reputation will not only help firms increase their publicity and social disclosure but also become a driving factor for firms to disclose more precise information. That is, firms will be more vigilant to maintain their social image because it is costly for those firms to ruin previously accumulated intangible assets (Cui et al. 2018).

On the other hand, according to stakeholder theory-based-CSR-information asymmetry nexus, CSR-related reputation will help the firm maintain a higher level of information accuracy through third-party monitoring mechanisms such as analyst following (Hong and Kacperczyk 2009), recommendation (Ioannou and Serafeim 2015; Luo et al. 2015), and analyst forecast accuracy (Dhaliwal, Radhakrishnan, Tsang, and Yang 2012). all of which will be promotive in building an environment with higher information quality, especially for firms that need intensive monitoring (Dhaliwal et al. 2011; Halov and Heider 2011). In this

[13] Because under the completely transparent information environment, it becomes significantly difficult for managers to report false information without being detected by investment targets (Richardson, Welker, and Hutchinson 1999; Trueman and Titman 1988).

vein, we conjecture that firms with a higher level of CSR-related reputation are likely to keep and promote a higher level of information accuracy.

In sum, investment targets will regard those investors with a higher level of CSR as having a lower level of information asymmetry because CSR activities are indicative of high information accuracy and more information disclosure. As such, they will form a trustful relationship. Compared with those firms that do not have CSR engagement, firms with a higher level of CSR are more likely to successfully bid for investment projects from many other competitive counterparts due to the lower level of information asymmetry between investors and investment targets. We, therefore, believe that CSR help firm build a trustful relationship with investment targets and such relationship will, in turn, make investment targets more likely to collaborate with focal investors and eventually help them achieve more investment opportunities and eventually promote their investment expenditure. Therefore, we hypothesize that:

Hypothesis 1: *Engaging in CSR activity has positive effects on firm investment expenditure.*

Hypothesis 2: *Investment opportunities mediated the positive relationship between CSR and investment expenditure.*

The moderating effect of information asymmetry

As we argued before, CSR activities help firms alleviate the information asymmetry between investment targets and investors, which helps them achieve more investment opportunities and lead to a higher level of investment expenditure. In order to further reinforce our argument that CSR improves investment through lowering information asymmetry, we thus examine the moderating effect of information asymmetry under different industry contexts on CSR–investment relationship.

First, in the environment with a higher level of analysts' attention and analysts' reporting, the

information will be more easily accessible to investment targets (Andrade and Chhaochharia 2010). As financial analysts publish analyst reporting, it will be more convenient for investment targets to get direct information about potential investors, and outside stakeholders (investment targets) can use this information to evaluate focal firms (investors). When investment targets compare different investors' situations based on analysts' reporting, they are more likely to get a more deepened and insightful picture of their internal situation, which further lowers the dependence on investors' information disclosure. Plus, with the help of financial analysts, investors' moral hazard could largely be mitigated due to the efficient information transfer and abundant information availability (Leland and Pyle 1977). For instance, information intermediaries will likely compile the upcoming vital issues in the market, package information from multiple resources, and summarize essential concepts in the form of an article for market participants to make decisions (Bushee, Core, Guay, and Hamm 2010). This summarizing behavior of information intermediaries will improve the information available for investors to make appropriate decisions based on their inference, results in a higher level of successful trading behavior (Chae, 2005). In other words, it is the increased level of information available from financial intermediaries that leads to reduced information asymmetry, which finally promotes increased successful investment behavior.

Second, in an environment with high-quality financial intermediaries (such as more oversea auditing firms and Big Four auditing firms (Li et al. 2019)), information asymmetry level will likely decrease with the help of more accurate information. Financial intermediaries coming from the oversea market or Big four are more professional agencies than other financial intermediaries. Therefore, they are less likely impacted by forecast herding behavior due to the observation of other analysts, both of which will provide more accurate information and lower the level of information asymmetry (Barron, Kim, Lim, and Stevens

1998). Benefiting from increased information accuracy provided by international auditing intermediaries, investment targets will thus make an appropriate judgment about potential investors (Bushee, Core, Guay, and Hamm 2010). As we mentioned before, the process of compiling and summarizing information will not only increase information availability but also generate filtered, reflected, and processed information, which makes the information understandability easier and lead to a lower level of information misunderstanding (Barron, Kim, Lim, and Stevens 1998). Given the above argument, the information accuracy will likely improve to a large extent, and investment targets will more likely distinguish "good" investors from "bad" ones (Healy and Palepu 2001). Therefore, investment targets will more effectively use that accurate information to evaluate and make prompt investment decisions, resulting in a lower level of information dependence on investors' CSR disclosure to evaluate potential investors.

Overall, given the above mechanisms, in a more developed-information environment where firms' information will be more accessible to investment targets with lower costs, higher comprehensiveness, and accuracy. They, therefore, do not necessarily need to depend on CSR as their primary source to judge a firm. The effectiveness of CSR on improving information quality will thus be largely mitigated. In contrast, in less-abundant-information environments, accessing firms' information will be more painful and expensive, CSR will be of great importance in effectively helping firms getting and evaluating information (Sanders and Boivie 2004). We thus hypothesize that

Hypothesis 3: *The positive relationship between CSR and investment expenditure will be weaker in a stronger asymmetric environment.*

Hypothesis 4: *Investment opportunity mediates the interactive effects of CSR and information asymmetry on investment expenditure.*

DATA AND METHODS

Data and sample

In the current study, we use the population of Chinese listed companies from 2009-2015 to construct our panel dataset. The data is drawn from the China Stock Market and Accounting Research (CSMAR) database. Information from the China Statistical Yearbook and WIND database are further employed to obtain information regarding regional development and firm characteristics of our sample. The main database-CSRMAR-provides firm-level donation information and key accounting data for all firms in our sample. While our sample focuses on those firms with socially responsible activities, to avoid sampling biases, we employ Heckman two-stage model (Heckman 1979) as suggested by previous literature too (Du, Bai, and Chen 2019; Wang, Choi, and Li 2008; Wang and Qian 2011). After merging the three databases and dropping missing values of key variables and excluding financial industries (Deb, David, and O'Brien 2017; Kim and Bettis 2014; O'Brien and Folta 2009), we ended up with 3079 firm-year observations. Table 2-1 presents the sample composition by year, region, and industry. The sample distribution by industry is based on the Chinese Securities Regulatory Commission (CSRC) industry code with the two-digit specification. Table 2-1 shows that manufacturing industries have 1778 observations and account for about 60% of our final sample. Other industries such as constructions, real estate, wholesale and retail trade, transportation, Hotels, Restaurants & Leisure, and Software & service account for more than 20%. The sample distribution by year shows that the number of observations increases annually from 2009 to 2015. We can also find that observation distribution by region shows firms concentrate on the capital city (Beijing) and eastern cities such as Zhejiang, Guangdong, Jiangsu, Shanghai, and Shandong.

[Insert Tables 2-1 about here]

Measurements

Dependent variable

In line with previous literature, we measure the investment expenditure as the firm's capital expenditure (CAPX)[14] deflated by beginning total asset (Chen, El Ghoul, Guedhami, and Wang 2017; Chen, Sun, Tang, and Wu 2011; Gulen and Ion 2015; McLean, Zhang, and Zhao 2012)[15].

Independent variable

The level of CSR efforts. We measure the invested efforts in CSR provided by Rankins CSR Rating (RKS) database. RKS is an independent third-party of the CSR rating agency. It evaluates firms' corporate social behavior from three main dimensions within 63 sub-items, which reflect the efforts companies invest in their CSR activities. We use the score of CSR from this database as the measurement of investment of CSR, which is an accredited representation of CSR effort invested by a firm (Marquis and Qian 2014).

Moderating variables

The level of information asymmetry. We use environmental asymmetry as the moderating variable of CSR–investment relationship. Following Anderson et al. (2009) and Wang et al. (2018), we regard analyst coverage as the measurement of information asymmetry. In specific, we use the average number of firm analyst attention, measured as the industry mean level of the firm's number of analyst attention, to measure information asymmetry. Then, we sort this variable and code those values smaller than twenty-quantile value as 1, otherwise 0. We also use the average number of firm analysts reporting, measured as the industry mean level of the number of firm analyst reporting, to measure information asymmetry. Then, we sort this

[14] Firms' yearly growth in property, plant, equipment, and other long-term assets.

[15] As the measurement of investment and cash flow is critical in our paper. We also provide alternative measurement of investment expenditure and cash flow in our results which are in line with our expectations.

variable and code those values smaller than twenty-quantile value as 1, otherwise 0. We also follow Li et al. (2019) and use the number of firms with Big 4, measured as the industry total number of firms with Big 4, to measure information asymmetry. Then, we sort this variable and code those values smaller than twenty-quantile value as 1, otherwise 0. Besides, we use the number of firms with oversea auditing agency, measured as industry total number of firms with oversea auditing agency, to measure information asymmetry. Similarly, the value smaller than the twenty-quantile value as 1, otherwise 0. For the above four dummy variables coded as 1 indicate the higher information asymmetry.

Mediating variable

We use the firm's Tobin's Q[16] as the measure of investment opportunity (growth opportunity). This is calculated as the market value of equity, the book value of non-tradable shares and liabilities, divided by book value of total assets (Bhandari and Javakhadze 2017; Chen et al. 2011; Gulen and Ion 2015; McLean et al. 2012).

Control variables

Financial performance. We use earnings before interest, tax, depreciation, and amortization (EBITDA) (Paeleman & Vanacker, 2015) instead of net income to minimize the effect of non-cash flow accounting numbers (e.g., depreciation and tax treatments) on our results. We use total assets to standardized EBITDA and make it comparable for firms of different sizes (Brav 2009). Debt financing. We measure the firm's

[16] According to Tobin (1969), marginal q predicts investment. However, marginal q is unobservable and many studies use average q as a substitute for marginal q (Blanchard, Rhee, & Summers, 1993; Fazzari, Hubbard, & Petersen, 1988; Hayashi, 1982; McLean, Zhang, & Zhao, 2012; Rauh, 2006). As noted by Hayashi (1982), interchangeably using average q with marginal q should base on average profit strongly correlates with marginal profit. Other studies also regard average q as investment opportunities (Chen, El Ghoul, Guedhami, and Wang 2017) or growth opportunities (Bhandari & Javakhadze, 2017).

debt financing as the yearly change of debt issuance scaled by beginning total assets. Equity financing. We measure the firm's equity financing as the yearly change in book equity value minus the change in retained earnings, all scaled by beginning assets (McLean et al. 2012). Size. We measure firm size as the log of the number of firm employees. State ownership. We measure firm state ownership as a dummy that is equal to 1 if the firm is controlled by the state, and 0 otherwise. Gross Domestic Product Per Capita. We measure GDP Per Capita as the GDP in each province scaled by the total province population. We also control the year and industry level fixed effects by adding year and industry dummy variables.

The above variable descriptions can be found in appendix table 2-1.

Model specification

We use the model suggested below to test the effect of CSR on investment:

$$Investment\ expenditure_{i,t+1} = \beta_0 + \beta_1 CSR_{i,t} + \beta_2 CFP_{i,t} + \beta_3 CashFlow_{i,t} + \beta_4 AGE_{i,t} +$$

$$\beta_5 GDP\ PC_{region,t} + \beta_6 State\ Dummy_{i,t} + \beta_7 Debt\ financing_{i,t} + \beta_8 SIZE_{i,t} + \beta_9 Equity\ financing_{i,t} +$$

$$\beta_{10} LAMBDA_{i,t} + \beta_{11} Analyst\ Attention_{i,t} \cdot CSR_{i,t} + \beta_{12} Analyst\ Reporting_{i,t} \cdot CSR_{i,t} +$$

$$\beta_{13} Oversea\ Auditing\ firm_{i,t} \cdot CSR_{i,t} + \beta_{14} Big\ 4_{i,t} \cdot CSR_{i,t} + \beta_{15} FAC1_{i,t} \cdot CSR_{i,t} + \beta_{16} FAC2_{i,t} \cdot CSR_{i,t} +$$

$$\sum \beta_j\ Industry\ Dummies + \sum \beta_k\ Year\ Dummies + \varepsilon_{i,t} \qquad \textbf{Eq (1)}$$

Where β_0 is the time-invariant intercept; β_1 to β_{10} are slope coefficients of independent variable and control variables. β_{11} to β_{16} are slope coefficients of moderating effects of information transparency (β_{11} to β_{14} are four dummy variable to represent the information asymmetry; β_{15} and β_{16} are coefficients of information transparency generated by principal component analysis). β_{j} and β_{k} are coefficients of industry and year dummy variables to control for industry fixed effects and changing economic conditions. The dependent variable is investment expenditure, which is log-transformed. CSR

represents social responsibility scores. CFP is the firm's financial performance. FAC1 represents the predicted score from principal component analysis of the first two information asymmetry variables (analyst attention and analyst reporting). Similarly, FAC2 represents the predicted score from principal component analysis of the last two information transparency variables (Oversea auditing firm and Big four).

We follow the generalized estimating equation (GEE) modeling developed by Liang and Zeger (1986) to analyze our hypotheses. Compared to the fixed-and-random-effects model, the GEE model estimates more robust and consistent coefficients when a non-independence issue presents (Ndofor, Sirmon, & He, 2011). The GEE approach allows for an unrestricted correlation structure and is widely used in economics, political sciences, and other fields in social sciences and business studies to analyze correlated data (Paeleman and Vanacker 2015). We also use two-stage least square (2sls) regression to confirm that our results are robust and consistent.

RESULTS

Descriptive statistics and correlation matrix of Heckman first-stage regression are provided in table 2-2. We find that the firm's debt financing, financial performance, age, size, and industry-level CSR score positively correlate with CSR choice. Also, the positive sign of GDP Per Capita indicates that the higher the regional development (GDP Per Capita), the higher the likelihood of CSR choice. We can find that when the state controls a firm, it will more likely engage in CSR. The above findings are in line with what has been found in previous studies (Mcwilliams and Siegel 2001). Table 2-3 shows the correlation coefficients and descriptive statistics for Heckman second-stage regression. The investment opportunity (Tobin's Q) positively correlates with investment expenditure, supporting the argument of (Hayashi 1982; Tobin 1969) that investment expenditure depends on investment opportunities. CSR also positively correlates with

investment expenditure. Other significant correlations are found between size and investment opportunity (-0.316) and size and CSR (0.402). The significant correlation can be found between FAC1 and its two components (analyst attention and analyst reporting). The reason that there is a significant correlation between FAC1 and its two components is that FAC1 is the principle component result of analyst attention and analyst reporting. We can also find that Big 4 and Oversea auditing firms both have significant correlations with FAC2. Also, analyst attention and analyst reporting positively correlated (0.978); Oversea auditing firm and Big 4 are also positively correlated (0.996). The above issues will not lead to multicollinearity because they are moderating variables and will not be added in the same model simultaneously. In order to ensure that our study is not bear the problem of multicollinearity, we further compute the variance inflation factors (VIFs). The largest number of VIF of our regressors is 1.07, with an average of 1.03, which indicates that there is no problem of multicollinearity in our results.

[Insert Tables 2-2 and 2-3 about here]

Table 2-4 provides the Heckman first- and second-stage regression. In model (1), we run the firm's CSR dummy against firm-level control variables. In model (2), we add industry and year fixed effects. In model (3), we further use the industry-level CSR score as a valid instrumental variable (Wang and Qian 2011). In model (4), we use the alternative measurement of Cash Flow[17] and find a consistent result. After estimating the additional control, LAMEDA, from the first stage, we further add it into Heckman second-stage to predict the CSR–Investment relationship. In model (7), CSR has significantly positive effect (coefficient = 0.005, $p < 0.05$) on firm's Investment, fully supporting our hypothesis 1. In model (8) to

[17] We use beginning of year's book value of total asset to scale cash flow.

model (10), we use alternative measurements of Investment opportunity and Cash Flow to reconfirm our hypotheses are consistent under different measurements. As can be found in the model (8), we use alternative Cash Flow and find consistent results (coefficient = 0.005, $p < 0.05$). In model (9), we use alternative Investment[18] and original measurement of Cash Flow and find consistent results (coefficient = 0.003, $p < 0.05$). In model (10), we use both alternative Investment and Cash Flow and get consistent result (coefficient = 0.002, $p < 0.1$). Based on the regression results of the model (3) and model (7), we further test the mediating effect of Investment opportunity on CSR–Investment relationship.

[Insert Tables 2-4 about here]

To test hypothesis 2 and to assess the presence of the mediating effect of Investment opportunity on CSR–Investment relationship, we follow the procedure suggested by (Baron and Kenny 1986). Three steps should satisfy before we can confirm that there is a mediating effect. First, the independent variable (CSR) should be significantly associated with the mediating variable (Investment opportunity). Second, the independent variable should be significantly associated with the dependent variable (Investment). Third, after adding a mediating variable (Investment opportunity) in the second step, the original significant relationship between the independent variable (CSR) and dependent variable (Investment) becomes less (partial mediation) or non-significant (full mediation).

In table 2-5, model (1) shows the CSR–Investment relationship (first step) (coefficient = 0.0049, $P < 0.05$), the same model shown in table 2-4 model (7). Model (2) exams the relationship between CSR and Investment opportunity (second step). We find that CSR positively associates with Investment opportunity

[18] We use beginning of year's book value of net fixed asset to scale CAPX as the new measurement of investment expenditure.

(coefficient = 0.0039, P < 0.1). In model (3), we further add Investment opportunity (third step) and find that CSR is significant, but its coefficient becomes smaller than the original coefficient (coefficient = 0.0045, P < 0.05). Therefore, according to the mediating identification procedure, we confirm that Investment opportunity partially mediates CSR–Investment relationship. The findings above fully support hypothesis 2, which states that the Investment opportunity appears to mediate CSR–Investment relationship.

[Insert Tables 2-5 about here]

In table 2-6, we test the moderating effects of information asymmetry on CSR–Investment relationship. In order to incorporate different levels of information asymmetry, we first sort the information asymmetry variable and generate a dummy variable (if corresponding variable < value of 20 percentile) to indicate the high level of information asymmetry. In model (1), the below 20-percentile dummy of industry mean-level analysts' following positively moderates CSR-Investment relationship, indicating that the higher the information asymmetry, the stronger the positive effect of CSR on Investment. In model (2) and (3), we find the same positive moderating effect of information asymmetry dummy measured as industry-level analyst reporting and the total number of oversea auditing firms. We do not find a significant moderating effect of information asymmetry dummy of the industry-level total number of firms with Big 4 auditing firms (model (4)). Last, in the model (5) and model (6), we use principal component analysis to predict FAC1 for both Analyst attention and Analyst reporting and FAC2 for both Overseas auditing firms and Big 4. As indicated in the model (5), the moderating effect of FAC1 has a non-significant moderating effect on CSR–Investment relationship while FAC2 significantly moderates effect on the relationship between CSR and Investment. As FAC1 and FAC2 are principal component analysis result, the higher the value of the above two variables indicate the lower the information asymmetry. Thus, a negative moderating effect

complies with our previous statement in hypothesis 3, which states that CSR–Investment relationship becomes stronger in a more asymmetric environment. In sum, the above moderating effects reinforce our argument that CSR acts as a vehicle to reduce information asymmetry between investment targets and investors and improves firm-level investment, which fully supports hypothesis 3. The moderating effects of those information asymmetry variables can be found in figure 2-2 to figure 2-5.

[Insert Tables 2-6 about here]

[Insert Figure 2-2 to 2-5 about here]

In table 2-7 Panel A to Panel B, we further show the mediated moderation analysis of the effect of CSR impacted by information asymmetry on investment through the path of investment opportunity. According to Baron and Kenny (1986) and Muller, Judd, and Yzerbyt (2005), four steps should be fulfilled in order to demonstrate the mediated moderation process. First, the interaction term of the independent variable and moderator should significantly predict the dependent variable; second, the independent variable should significantly predict the mediator; third, after adding interaction term of independent variable and moderator, the mediator should significantly predict the dependent variable. Last, the original interaction term of independent variable and moderator should be insignificant (full mediation) or significant with the absolute value being smaller than the original interaction term.

In model 2 of Table 2-7 Panel A, we find the significant coefficient of CSR*Analyst attention (coefficient = 0.009, $p < 0.1$). Model 3 and Model 4 are used to test the mediated moderation effect. The interaction term of CSR and Analyst attention is significant in model 3 (coefficient = 0.005, $p < 0.05$). Model 4 shows that the investment opportunity is significant (coefficient = 0.274, $p < 0.01$), with the moderation effect of information asymmetry being weaker than that in model 2, supporting the partially

mediating effect. In sum, the effect of CSR on investment opportunity depends on information asymmetry and the effect of an investment opportunity on investment is significantly different from zero. Therefore, the above results suggest that the moderating role of information asymmetry is mediated through investment opportunity. In other words, the effect of CSR impacted by the information asymmetry on investment follows the path of investment opportunity. On the right side of table 2-7 Panel A, we also find the partially mediated moderation effect of CSR on investment for information asymmetry measured by industry-level analyst reporting. However, we could not find a mediated moderation effect for information asymmetry measured by oversea auditing firms and Big Four auditing firms. Therefore, we partially support the hypothesis 4.

[Insert Tables 2-7 about here]

Robustness checks

In order to ensure that our results are valid, we further run additional robustness tests to confirm the positive relationship between CSR and investment expenditure and the mediating effect of investment opportunity. We use an alternative model to address the problem of endogeneity, which may arise from omitted variables.

Two-stage Least Square (2sls) estimator

To mitigate the concerns of estimation bias caused by endogeneity. We perform an instrumental variable (IV) estimation procedure consisting of two-step estimation. We first regress CSR scores against two instrumental variables and control variables and predict a new value of CSR from this stage. We then use the predicted value of CSR as the new independent variable to test whether original CSR–Investment relationship still holds after controlling different control variables. City green area, city green park area,

and city green area per capita are chosen as instrumental variables. As can be seen in Table 2-8, the dependent variable in models (2), (4), (6), (7) is Investment. From the endogeneity test in model (2), (4), and (6), the p-value is smaller than 0.001 in each of three models, indicating that our independent variable CSR is endogenous. Using city-green area, city-green-park area, and green-area per capita as instrumental variables, we perform 2sls regression and find that the choice of the above instruments is valid in model (1), (3), and (5). From the Cragg and Donald (1993) instrument relevance test, the p-value is less than 0.001, rejecting the null hypothesis that the instruments are weak. From Sargan (1958) overidentification test, the exogeneity of the instrumental variables is confirmed in the previous two models (i.e., accept the null hypothesis of no significant correlations between the instrumental variables and the error terms in the CSR-Investment regression) but reject the null hypothesis in model (5). We thus reject model (5) and chose one model from either model (1) or model (3) as the first-stage regression. Due to the larger loglikelihood ratio statistics of model (1), we choose model (1) as the baseline model to estimate the predicted value of CSR. Based on the predicted value of CSR in model (1), we further estimate the second CSR–Investment relationship in model (2) and confirm our previous findings are robust and consistent (coefficient = 0.051, $p < 0.01$). We further add LAMEDA in model (7) to control endogenous issue caused by sample selection and reinforce previous findings (coefficient = 0.056, $p < 0.01$). Therefore, the robustness check from 2sls fully supports our previous hypothesis of CSR can improve firm investment expenditure after we control endogeneity.

[Insert Tables 2-8 about here]

In table 2-9, we use the predicted value of CSR from model (1) as the new independent variable to test the mediating effect of Investment opportunity. In model (1), the coefficient of CSR is 0.04, smaller than

the coefficient of CSR in model (3) (0.038, $p < 0.01$), supporting the partial mediating effect of Investment opportunity. We further test the moderating effect of information asymmetry on direct CSR–Investment relationship and confirm our previous results of the positive moderating effect of four industry-level-asymmetry dummies (below 20 percentile value of the mean level of industry-level analysts' attention, analysts' reporting, and the sum of industry-level firms' oversea auditing firms, Big 4 auditing firms) in Table 2-10. In sum, we fully support our hypothesis 3 and find consistent results with previous findings shown in Table 2-6. For FAC1 and FAC2, we find the same significant moderating effects as we found in table 2-6.

[Insert Tables 2-9 and 2-10 about here]

DISCUSSION

We investigate the relationship between CSR and investment expenditure under the perspective of information asymmetry. The results show that CSR is an enabling factor in improving the firm's investment expenditure. In specific, we find that CSR will promote firm-level investment expenditure and this relationship is mediated through investment opportunities. Given the fact that CSR activities can improve the information environment, we specifically find that in a less transparent environment, CSR has a stronger effect on investment expenditure than in a more transparent environment. We argue that because stakeholders can get information cheaper and easier in a more transparent environment than those in a less transparent environment, the information disclosure function of CSR will be largely diluted. The impact of CSR on investment will be weaker.

Conversely, given the information barriers between investment targets and investors are severe in a less transparent environment, the impact of CSR on investment will be stronger. We, therefore, find a

positive impact of CSR on investment and corresponding moderating effects of information transparency on CSR–investment relationship. In sum, we argue that CSR activities help promote information exchange between investment targets and investors and, thus, help them build mutual trust, which further increases the level of investment expenditure through getting more investment opportunities.

The findings of this paper have several important implications for CSR literature. First, the CSR literature mainly focuses on how firms' CSR can improve a firm's financial performance (Kim, Kim, and Qian 2018; Orlitzky and Benjamin 2001; Wang and Qian 2011), relatively litter focus is given to firm-level investment behavior. This study helps to enrich CSR literature from an investment perspective. More importantly, current literature that links CSR to investment generally assume information is a detrimental factor that negatively impedes firms' investment, but few studies empirically uncover information asymmetry black box and combine it with CSR–information relationship. In this paper, we are the first to address this omission by using industry-level information asymmetry as a moderator to show how CSR-investment relationship will be affected by different levels of information transparency.

Second, we contribute to the literature of investment from an investment acceptance perspective. Different from the long-believed perspective that firm-level investment is solely determined by investment opportunity (Hayashi 1982; Tobin 1969), we challenge this perspective and argue that not all firms could get enough investment opportunities even though they have enough funding to support their investment. Therefore, our research enriches the investment literature by showing that it is not only important to increase its internal funding but also to keep information exchange and build up a trustful relationship with the investment target. We empirically find that after controlling debt, equity, and cash flow, CSR can still significantly improve the firm's investment expenditure. It is evident that the capability of obtaining

financing is not a sole factor that affects the firm's investment, but how firms use CSR to signal their information is of also critical importance.

Limitations and future research directions

Given that this paper builds on information perspective and investigate CSR-investment relationship, it is natural to discern that how to measure information asymmetry is very important. Thus, the measurement of information asymmetry can be improved in future studies. We use analysts' following (Anderson et al. 2009; Wang et al. 2018) and character of audit firms (Big 4 or oversea) (Li et al. 2019) suggested by previous literature as the measurement of information transparency within each industry. It is interesting to check whether the level of information asymmetry will be different in different countries and how do these differences may impact on CSR-investment relationship. The cross-country study may be more interesting and illustrative to indicate information asymmetry as it is natural to predict that information asymmetry levels will be different between emerging and developed economies (McLean et al. 2012).

It is also interesting to check the impact of information by incorporating the impact of a specific event on the CSR-investment relationship. Using event study method and Propensity Score Matching may be more demonstrative in showing the importance of information disclosure on social acceptance in terms of investment and investment opportunities.

Conclusions

By empirically analyzing data on CSR and investment of publicly listed Chinese firms from 2009 to 2017, we show that CSR can improve investment by overcoming information asymmetry between investment targets and investors. We believe this research provides an angle to analyze how CSR promotes investment expenditures by increasing information exchange between different social participants. Our

study may be an important step to understand how CSR impact on investment behavior from information asymmetry perspective. Other studies could broaden information asymmetry or CSR by checking other meaningful contingent factors or mediating factors within the relationship between CSR and investment activities.

Table 2-1: Sample Description by Industry, Year, and Region

CSRC Industry code	two-digit code	Industry Name	Freq.	Cum. %	Year	Freq.	Cum. %	Region Code	region	Freq.	Cum. %
A	01-05	Agriculture forestry and fisheries	43	1.4	2009	249	8.09	11	Beijing	412	13.38
B	06-11	Mineral industries	148	6.2	2010	359	19.75	12	Tianjin	79	15.95
C	13-42	Manufacturing	1,778	63.95	2011	378	32.02	13	Hebei	50	17.57
D	44-46	Electricity, Heat, gas, and Water Supplies	183	69.89	2012	434	46.12	14	Shanxi	59	19.49
E	47-50	Constructions	86	72.69	2013	513	62.78	15	Inner Mongol	22	20.2
F	51-52	wholesale/retail trade	170	78.21	2014	558	80.9	21	Liaoning	72	22.54
G	53-59	Transportation	215	85.19	2015	588	100	22	Jilin	44	23.97
H	61-62	Hotels, Restaurants & Leisure	7	85.42	Total	3079		23	Heilongjiang	22	24.68
I	63-65	Software & Service	119	89.28				31	Shanghai	272	33.52
K	70	Real Estate	209	96.07				32	Jiangsu	168	38.97
L	71-72	Lease & and Commercial Services	24	96.85				33	Zhejiang	257	47.32
M	73-75	Science & Technology Services	1	96.88				34	Anhui	112	50.96
N	77-78	Water, Environment, and Public Utilities	20	97.53				35	Fujian	238	58.69
O	79 81	Residential & other Services	1	97.56				36	Jiangxi	48	60.25
Q	83	Hygienism & social Services	6	97.76				37	Shandong	185	66.26
R	85-87	Culture, physical, and entertainment Services	22	98.47				41	Henan	131	70.51
S	90	Other	47	100				42	Hubei	79	73.08
Total			3,079					43	Hunan	52	74.76
								44	Guangdong	371	86.81
								45	Guangxi	34	87.92
								46	Hainan	24	88.7
								50	Chongqing	27	89.57
								51	Sichuan	83	92.27
								52	Guizhou	35	93.41
								53	Yunnan	65	95.52
								54	Tibet	12	95.91
								61	Shanxi	32	96.95
								62	Gansu	5	97.11
								63	Qinghai	26	97.95
								64	Ningxia	12	98.34

65	Sinkiang	51	100
Total		3079	

Note: This table presents the region, year, and industry (Classification is based on the Chinese Securities Regulatory Commission (CSRC) industry code with two-digit Specification) distributions for the 3079 firm-year observations that comprise the sample between 2009 to 2015.

Table 2-2: Descriptive Statistics and Correlations in Heckman first stage regression

		Mean	S.d	1	2	3	4	5	6	7	8	9
1	CSR Dummy	0.317	0.465									
2	Cash Flow	0.209	11.863	-0.006								
3	Equity financing	0.032	0.105	-0.014	-0.001							
4	Debt financing	0.086	0.147	0.047***	-0.069***	0.123***						
5	CFP	0.178	0.225	0.071***	0.002	0.027***	-0.018*					
6	Age	15.255	4.813	0.018*	0.003	-0.036***	-0.047***	0.018*				
7	GDP Per Capita	10.759	0.483	0.036***	0.012	-0.027***	-0.026**	0.003	0.164***			
8	Size	22.062	1.262	0.454***	-0.024**	-0.013	0.185***	0.074***	0.071***	0.095***		
9	Industry CSR	36.308	2.510	0.089***	0.009	0.002	0.034***	0.069***	-0.110***	-0.016	0.209***	
10	State Dummy	0.482	0.500	0.206***	0.015	-0.053***	-0.006	0.019*	0.023**	-0.121***	0.325***	0.140***

Note: The dependent variable is measured for year t; the independent variable, for t – 1. Number of observations is 9719. Significance level: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 2-3: Descriptive Statistics and Correlations in Heckman Second Stage regression

	Variables	Mean	s.d	1	2	3	4	5	6	7	8
1	Investment	-3.365	1.137								
2	Investment opportunity	1.527	1.550	0.045**							
3	CSR	36.780	12.012	0.063***	-0.095***						
4	CFP	0.195	0.259	0.024	-0.030*	-0.016					
5	GDP Per Capita	10.877	0.461	-0.170***	0.031*	0.224***	-0.01				
6	Debt financing	0.087	0.151	0.087***	-0.128***	-0.014	-0.031*	-0.059***			
7	Equity financing	0.032	0.103	0.058***	0.068***	-0.013	0.012	-0.007	0.101***		
8	Size	8.438	1.389	0.256***	-0.316***	0.402***	-0.128***	-0.017	0.054***	-0.056***	
9	Cash Flow	0.226	12.393	0.036**	0.03	-0.006	0.006	0.001	-0.101***	0.005	-0.026
10	Age	16.387	4.805	-0.169***	-0.002	0.023	0.002	0.135***	-0.035**	-0.01	-0.114***
11	State Dummy	0.632	0.482	-0.016	-0.212***	0.087***	0.046**	-0.005	-0.030*	-0.073***	0.141***
12	Analysts attention	9.479	1.504	0.188***	0.141***	0.120***	-0.103***	-0.015	-0.011	0.041**	0.248***
13	Analyst reporting	18.591	3.503	0.121***	0.149***	0.098***	-0.096***	0.012	0.007	0.042**	0.197***
14	Oversea auditing firms	206.125	141.397	0.199***	0.116***	-0.072***	-0.167***	-0.168***	-0.089***	0.041**	0.124***
15	Big 4	401.803	274.700	0.163***	0.119***	-0.084***	-0.184***	-0.158***	-0.079***	0.042**	0.105***
16	FAC1	-0.027	1.472	0.156***	0.146***	0.110***	-0.100***	-0.001	-0.002	0.042**	0.225***
17	FAC2	-0.120	1.406	0.181***	0.117***	-0.078***	-0.176***	-0.163***	-0.084***	0.042**	0.114***
18	LAMBDA	0.892	0.457	0.032*	0.508***	-0.349***	-0.087***	-0.133***	-0.024	0.143***	-0.647***

		Mean	s.d	9	10	11	12	13	14	15	16	17
10	Age	16.387	4.805	-0.032*								
11	State Dummy	0.632	0.482	0.013	-0.107***							
12	Analysts attention	9.479	1.504	0.016	-0.184***	0.008						
13	Analyst reporting	18.591	3.503	0.013	-0.144***	-0.013	0.978***					
14	Oversea auditing firms	206.125	141.397	0.011	-0.091***	-0.131***	0.015	-0.060***				
15	Big 4	401.803	274.700	0.009	-0.069***	-0.148***	-0.013	-0.078***	0.996***			
16	FAC1	-0.027	1.472	0.015	-0.165***	-0.002	0.995***	0.994***	-0.022	-0.045**		
17	FAC2	-0.120	1.406	0.01	-0.080***	-0.140***	0.001	-0.069***	0.999***	0.999***	-0.034*	
18	LAMBDA	0.892	0.457	0.026	0.024	-0.400***	-0.01	0.007	0.118***	0.133***	-0.001	0.125***

Note: The dependent variable is measured for year t + 1, the independent variable, for t. The number of observations is 3079. ATTEN is a dummy variable

if the industry-level mean of the firm number of analysts' attention is smaller than twenty-quantile of this variable, we code it as 1, otherwise 0. REPOR is a dummy variable if the industry-level mean of the firm number of analysts' reporting is smaller than twenty-quantile of this variable, we code it as 1, otherwise 0. OVERS is a dummy variable if the industry-level sum of firms with oversea auditing firms is smaller than twenty-quantile of this variable, we code it as 1, otherwise 0. Big 4 is a dummy variable if the industry-level mean of firms with Big 4 auditing firms is smaller than twenty-quantile of this variable, we code it as 1, otherwise 0. Significance level: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 2-4: Probit Estimates for Heckman First-Stage Model and Generalized Estimate Equation Model for Heckman Second-Stage Regression

Variables	Basic model		Heckman first stage	Alternative CF	Heckman second stage	Alternative DV and Cash Flow		
				CF1		CF1&DV	CF&DV1	CF1&DV1
	(1)	(2)	(3)	(4)	(7)	(8)	(9)	(10)
CSR $_{t}$					0.005**	0.005**	0.003**	0.002*
					(2.25)	(2.10)	(2.15)	(1.66)
Cash Flow $_{t-1}$	0.007	0.011*	0.011*					
	(1.34)	(1.92)	(1.87)					
Cash Flow1 $_{t-1}$				0.845***				
				(4.82)				
Equity financing $_{t-1}$	-0.561***	-0.051	-0.053	-0.030				
	(-4.66)	(-0.36)	(-0.37)	(-0.20)				
Debt financing $_{t-1}$	-0.140	-0.345***	-0.347***	-0.291***				
	(-1.58)	(-3.37)	(-3.39)	(-2.66)				
CFP $_{t-1}$	0.193***	0.270***	0.268***	0.237***				
	(3.65)	(4.20)	(4.16)	(3.52)				
Age $_{t-1}$	-0.013***	-0.000	0.000	-0.001				
	(-4.74)	(-0.04)	(0.12)	(-0.17)				
GDP Per Capita $_{t-1}$	-0.023	0.079**	0.081**	0.083**				
	(-0.86)	(2.21)	(2.24)	(2.20)				
Size $_{t-1}$	0.401***	0.565***	0.563***	0.563***				
	(34.84)	(36.83)	(36.45)	(34.00)				
State Dummy	0.192***	0.211***	0.210***	0.198***	-0.096	-0.123*	-0.069*	-0.078**
	(6.96)	(6.60)	(6.54)	(5.86)	(-1.40)	(-1.81)	(-1.92)	(-2.18)
CFP $_{t}$					0.188**	0.184**	0.050	0.012
					(2.16)	(2.12)	(0.47)	(0.13)
GDP Per Capita $_{t}$					0.021	-0.011	0.071*	0.041
					(0.30)	(-0.16)	(1.87)	(1.05)
Debt ratio $_{t}$					0.511***	0.546***	0.400***	0.407***
					(5.20)	(5.08)	(6.32)	(6.02)
Equity ratio $_{t}$					-0.033	0.063	0.300***	0.331***
					(-0.20)	(0.41)	(3.82)	(4.00)

Size $_t$					0.210***	0.182***	0.033*	0.016
					(6.44)	(5.78)	(1.84)	(0.91)
Cash Flow $_t$					0.001		0.002	
					(0.70)		(1.42)	
Cash Flow1 $_t$						0.795***		0.483***
						(3.59)		(4.05)
Age $_t$					-0.006	-0.001	0.001	0.003
					(-0.83)	(-0.21)	(0.17)	(1.01)
Industry-level CSR $_{t-1}$			0.009	0.006				
			(1.28)	(0.77)				
LAMBDA $_t$					0.582***	0.457***	0.125**	0.046
					(5.77)	(4.59)	(2.16)	(0.78)
Year Effect	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry Effect	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
INTERCEPT	-9.269***	-14.501***	-14.847***	-14.649***	-5.432***	-4.785***	-2.858***	-2.382***
	(-26.91)	(-27.89)	(-25.31)	(-24.33)	(-5.64)	(-5.09)	(-5.67)	(-4.66)
N	12547	9722	9719	8403	3079	2834	3080	2835
Loglikelihood	-6078.39	-4880.58	-4879.53	-4337.23				
Wald statistic	1846.33	2381.98	2381.80	2069.32				

Note: The dependent variable from model (1) to (3) is a dummy variable of CSR choice (value for 1 when a firm has CSR engagement, otherwise 0). The dependent variable from model (4) to (6) is firm-level investment expenditure. In Heckman first-stage, the CSR dummy is measured for year t; firm and industry-level controls measured for year t – 1. In Heckman second-stage, firm-level investment expenditure is measured for year t + 1, firm and industry predictors measured for year t. Robust t-statistics corrected for clustering at the firm level are presented in parentheses. Significance level: † 0.1 * 0.05 ** 0.01 *** 0.001.

Table 2-5: Mediating Effect of Investment Opportunity on CSR-Investment Relationship

	DV: INV	DV: INVOPP	DV: INV
	(1)	(2)	(3)
Investment opportunity $_t$			0.050***
			(2.88)
CSR $_t$	0.0049**	0.0039*	0.0045**
	(2.25)	(1.65)	(2.07)
CFP $_t$	0.188**	-0.518	0.167**
	(2.16)	(-0.942)	(2.07)
GDP Per Capita $_t$	0.021	0.377***	0.002
	(0.30)	(4.03)	(0.03)
Debt financing $_t$	0.511***	-0.498***	0.562***
	(5.20)	(-5.386)	(5.59)
Equity financing $_t$	-0.033	-0.604***	-0.056
	(-0.200)	(-2.723)	(-0.316)
Size $_t$	0.210***	-0.006	0.208***
	(6.45)	(-0.094)	(6.36)
Cash Flow $_t$	0.001	-0.001	0.001
	(0.70)	(-0.646)	(0.74)
Age $_t$	-0.006	-0.006	-0.004
	(-0.835)	(-0.594)	(-0.597)
State Dummy	-0.096	0.174	-0.109
	(-1.401)	(1.42)	(-1.590)
LAMEDA $_t$	0.582***	1.901***	0.497***
	(5.77)	(9.03)	(4.80)
Intercept	-5.432***	-4.149***	-5.205***
	(-5.636)	(-2.977)	(-5.387)
N	3079	3016	3024

Note: The dependent variable in model (1) and (2) are CSR score. The dependent variable in model (3) is the firm-level investment opportunity. The dependent variable is measured for year t + 1; independent and firm control variables measured for year t. Robust t-statistics corrected for clustering at the firm level are presented in parentheses. Significance level: † 0.1 * 0.05 ** 0.01 *** 0.001.

Table 2-6: Moderating Effects of Transparency on CSR-Investment Relationship

	ATTEN (<20%)	REPOR (<20%)	OVERS (<20%)	BIG4 (<20%)	FAC1	FAC2
	(1)	(2)	(3)	(4)	(5)	(6)
CSR_t	0.002	0.003	0.003	0.004*	0.005**	0.004*
	(0.89)	(1.31)	(1.58)	(1.92)	(2.17)	(1.90)
CFP_t	0.196**	0.190**	0.195**	0.190**	0.202**	0.191**
	(2.26)	(2.19)	(2.23)	(2.18)	(2.29)	(2.20)
GDP Per Capita $_t$	0.030	0.023	0.029	0.019	0.023	0.021
	(0.42)	(0.32)	(0.40)	(0.26)	(0.31)	(0.29)
Debt financing $_t$	0.517***	0.505***	0.517***	0.507***	0.500***	0.511***
	(5.29)	(5.12)	(5.26)	(5.16)	(5.05)	(5.21)
Equity financing $_t$	-0.042	-0.025	-0.041	-0.030	-0.034	-0.030
	(-0.27)	(-0.15)	(-0.26)	(-0.18)	(-0.21)	(-0.18)
$Size_t$	0.200***	0.206***	0.203***	0.206***	0.209***	0.202***
	(6.55)	(6.45)	(6.39)	(6.42)	(6.62)	(6.34)
Cash $Flow_t$	0.001	0.001	0.001	0.001	0.001	0.001
	(0.90)	(0.91)	(0.86)	(0.85)	(0.87)	(0.89)
Age_t	-0.004	-0.006	-0.005	-0.005	-0.004	-0.005
	(-0.57)	(-0.88)	(-0.69)	(-0.77)	(-0.65)	(-0.76)
State Dummy	-0.100	-0.101	-0.106	-0.104	-0.098	-0.106
	(-1.48)	(-1.48)	(-1.56)	(-1.53)	(-1.43)	(-1.56)
$LAMBDA_t$	0.550***	0.560***	0.554***	0.563***	0.574***	0.552***
	(5.70)	(5.65)	(5.59)	(5.63)	(5.77)	(5.48)
ATTEN (< 20%) $_t$	-0.634***					
	(-3.20)					
ATTEN $_t$ (< 20%) *CSR $_t$	0.011**					
	(2.33)					
REPOR $_t$ (< 20%)		-0.344**				
		(-2.22)				
REPOR $_t$ (< 20%) *CSR $_t$		0.008**				
		(2.28)				
OVERS $_t$ (< 20%)			-0.439*			
			(-1.81)			
OVERS $_t$ (< 20%) *CSR $_t$			0.010*			
			(1.70)			
Big 4 $_t$ (< 20%)				-0.142		
				(-0.66)		
Big 4 $_t$ (< 20%) *CSR $_t$				0.004		
				(0.85)		
FAC1 $_t$					0.065	
					(1.22)	
FAC1 $_t$ *CSR $_t$					-0.001	
					(-0.64)	

$FAC2_t$						0.101*
						(1.65)
$FAC2_t$*CSR_t						-0.003*
						(-1.76)
Year Effect	Yes	Yes	Yes	Yes	Yes	Yes
Industry Effect	Yes	Yes	Yes	Yes	Yes	Yes
INTERCEPT	-5.273***	-5.291***	-5.336***	-5.316***	-5.489***	-5.317***
	(-5.65)	(-5.56)	(-5.62)	(-5.55)	(-5.68)	(-5.56)
N	3079.000	3079.000	3079.000	3079.000	3079.000	3079.000

Note: The dependent variable is investment, measured for year t + 1; independent and firm control variables for t. ATTEN is a dummy variable if the industry-level mean of the firm number of analysts' attention is smaller than twenty-quantile of this variable, we code it as 1, otherwise 0. REPOR is a dummy variable if the industry-level mean of the firm number of analysts' reporting is smaller than twenty-quantile of this variable, we code it as 1, otherwise 0. OVERS is a dummy variable if the industry-level sum of firms with oversea auditing firms is smaller than twenty-quantile of this variable, we code it as 1, otherwise 0. Big 4 is a dummy variable if the industry-level mean of firms with Big 4 auditing firms is smaller than twenty-quantile of this variable, we code it as 1, otherwise 0. Robust t-statistics corrected for clustering at the firm level are presented in parentheses. Significance level: † 0.1 * 0.05 ** 0.01 *** 0.001.

Table 2-7 Panel A: Analysis of the Mediated Moderation:

The Impact of CSR on Investment Through the Path of Investment Opportunity.

	Information asymmetry-Analyst Attention				Information asymmetry-Analyst report			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
CSR_t	0.005**	0.003	-0.001	0.003	0.005**	0.004	-0.001	0.003
	(2.251)	(1.134)	(-0.871)	(1.084)	(2.251)	(1.518)	(-0.460)	(1.382)
$LAMEDA_t$	0.582***	0.582***	1.214***	0.312***	0.582***	0.584***	1.212***	0.306***
	(5.774)	(5.927)	(19.037)	(2.919)	(5.774)	(5.826)	(18.903)	(2.849)
Analyst attention $_t$		-0.491***	-0.277***	-0.411**				
		(-2.592)	(-3.192)	(-2.185)				
Analyst report $_t$						-0.280*	-0.131**	-0.243
						(-1.897)	(-2.084)	(-1.619)
Analyst attention $_t$ *CSR $_t$		0.009*	0.005***	0.008				
		(1.936)	(2.610)	(1.636)				
Analyst report $_t$ *CSR $_t$						0.006*	0.003*	0.005
						(1.721)	(1.870)	(1.458)
Investment opportunity $_t$				0.274***				0.277***
				(6.916)				(7.079)
Analyst attention $_t$ *Investment opportunity $_t$				-0.084				
				(-1.184)				
Analyst report $_t$ *Investment opportunity $_t$								-0.071
								(-1.292)
INDUSTRY, YEAR AND FIRM-LEVEL CONTROL VARIABLES ARE ADDED IN EACH MODEL.								
Intercept	-5.432***	-5.421***	-3.845***	-4.541***	-5.432***	-5.373***	-3.807***	-4.440***
	(-5.636)	(-5.756)	(-6.028)	(-4.730)	(-5.636)	(-5.631)	(-5.965)	(-4.585)
N	3079	3079	3016	3024	3079	3079	3016	3024

Note: The dependent variable is investment, measured for year t + 1; independent and firm control variables for t. Analyst attention is a dummy variable if the industry-level mean of the firm number of analysts' attention is smaller than twenty-quantile of this variable, we code it as 1, otherwise 0. Significance level: † 0.1 * 0.05 ** 0.01 *** 0.00

Table 2-7 Panel B: Analysis of Mediated Moderation:

The Impact of CSR on Investment Through the Path of Investment Opportunity.

	Oversea Auditing firm				Big 4 Auditing firm			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
CSR_t	0.005**	0.004*	-0.001	0.004*	0.005**	0.004**	-0.001	0.004*
	(2.251)	(1.801)	(-0.837)	(1.672)	(2.251)	(2.012)	(-0.447)	(1.823)
$LAMEDA_t$	0.582***	0.577***	1.205***	0.302***	0.582***	0.588***	1.207***	0.307***
	(5.774)	(5.700)	(19.074)	(2.775)	(5.774)	(5.781)	(19.021)	(2.822)
Oversea Auditing $firm_t$		-0.285	-0.371***	-0.200				
		(-1.209)	(-3.574)	(-0.833)				
Big 4 Auditing $firm_t$						-0.069	-0.193**	-0.027
						(-0.314)	(-1.968)	(-0.122)
Oversea Auditing $firm_t$ *CSR_t		0.007	0.008***	0.005				
		(1.175)	(3.446)	(0.869)				
Big 4 Auditing firm*CSR_t						0.003	0.004*	0.002
						(0.596)	(1.836)	(0.424)
Investment $opportunity_t$				0.270***				0.275***
				(6.900)				(7.000)
Oversea Auditing $firm_t$ *Investment $opportunity_t$				-0.051				
				(-0.732)				
Big 4 Auditing $firm_t$ *Investment $opportunity_t$								-0.058
								(-0.839)
INDUSTRY, YEAR AND FIRM-LEVEL CONTROL VARIABLES ARE ADDED IN EACH MODEL.								
Intercept	-5.432***	-5.415***	-3.820***	-4.529***	-5.432***	-5.387***	-3.819***	-4.463***
	(-5.636)	(-5.653)	(-6.036)	(-4.640)	(-5.636)	(-5.598)	(-6.015)	(-4.554)
N	3079	3079	3016	3024	3079	3079	3016	3024

Note: The dependent variable is investment, measured for year t + 1; independent and firm control variables for t. Analyst reporting is a dummy variable if the industry-level mean of the firm number of analysts' reporting is smaller than twenty-quantile of this variable, we code it as 1, otherwise 0. Significance level: † 0.1 * 0.05 ** 0.01 *** 0.001.

Table 2-8: 2sls Estimates for CSR-Investment Relationship

	1st stage (1)	2nd stage (2)	1st stage (3)	2nd stage (4)	1st stage (5)	2nd stage (6)	2nd stage (7)
City Green Area $_t$	0.019***				0.021***		
	(10.81)				(3.45)		
City Green Park Area $_t$			0.109***		-0.015		
			(10.24)		(-0.40)		
Green Area Per Capita $_t$	-0.358***		-0.520***		-0.331***		
	(-5.09)		(-6.50)		(-3.41)		
CSRHet1 $_t$		0.051***					0.056***
		(6.10)					(6.52)
CSRHet2 $_t$				0.061***			
				(6.88)			
CSRHet3 $_t$						0.050***	
						(5.96)	
CFP $_t$	0.015	0.056	-0.043	0.054	0.025	0.056	0.16
	(0.02)	(0.49)	(-0.06)	(0.47)	(0.03)	(0.49)	(1.54)
GDP Per Capita $_t$	2.091***	-0.116***	2.250***	-0.142***	2.075***	-0.112**	-0.04
	(4.75)	(-2.64)	(5.12)	(-3.20)	(4.70)	(-2.56)	(-0.88)
Debt financing $_t$	0.513	0.851***	0.375	0.841***	0.539	0.853***	0.856***
	(0.43)	(6.82)	(0.31)	(6.78)	(0.45)	(6.83)	(6.77)
Equity financing $_t$	0.087	0.374**	0.059	0.375**	0.089	0.374**	0.246
	(0.05)	(2.09)	(0.03)	(2.09)	(0.05)	(2.09)	(1.27)
Size $_t$	3.345***	-0.048	3.286***	-0.082***	3.353***	-0.044	0.085***
	(23.68)	(-1.60)	(23.19)	(-2.60)	(23.49)	(-1.46)	(2.60)
Cash Flow $_t$	0.003	0.003**	0.004	0.003**	0.003	0.003**	0.002*
	(0.23)	(2.23)	(0.26)	(2.13)	(0.23)	(2.24)	(1.87)
Age $_t$	-0.243***	0.004	-0.236***	0.006	-0.243***	0.004	0.011***
	(-5.91)	(1.14)	(-5.73)	(1.51)	(-5.90)	(1.09)	(2.83)
State Dummy $_t$	0.809**	-0.251***	0.811**	-0.254***	0.803**	-0.251***	-0.068*
	(2.08)	(-7.08)	(2.08)	(-7.18)	(2.06)	(-7.06)	(-1.72)
LAMEDA $_t$							0.641***

							(10.30)
Year effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Intercept $_t$	-10.158**	-2.763***	-9.694*	-2.565***	-10.339**	-2.788***	-5.803***
	(-2.04)	(-5.95)	(-1.94)	(-5.51)	(-2.07)	(-6.00)	(-10.28)
N	3271	3270	3271	3270	3271	3270	3079
Loglikelihood	-12090.43	-4228.01	-12096.35	-4222.44	-12090.34	-4228.91	-3922.66
R Square	0.34	0.4	0.34	0.4	0.34	0.4	0.42
Adjusted R Square	0.33	0.39	0.33	0.4	0.33	0.39	0.41
Weak identification test (Cragg-Donald Wald F statistic)	44.010 p<0.001		40.436 p<0.001		29.331 p<0.001		
Sargan statistic (overidentification test of all instruments)	0.107 p= 0.7433		0.073 p= 0.7868		13.168 p= 0.0014		
Endogeneity test of endogenous		27.602***		38.540***		27.520***	

Note: The dependent variable for model (1), (3), and (5) is the CSR score, measured at year t. The dependent variable for model (2), (4), (6), and (7) is the investment, measured for year t + 1; independent and firm control variables are measured for year t. CSRHet1 to CSRHet3 are predicted CSR value from the first stage of 2sls model. Robust t-statistics corrected for clustering at the firm level are presented in parentheses. Significance level: † 0.1 * 0.05 ** 0.01 *** 0.001.

Table 2-9: Estimates of The Mediating Effect of the Investment Opportunity on CSR-Investment Relationship

	2nd stage	2nd stage	2nd stage
	(1)	(2)	(3)
Investment opportunity $_t$			0.072***
			(5.40)
CSRHet1 $_t$	0.040***	0.034***	0.038***
	(6.68)	(4.46)	(6.19)
CFP $_t$	0.019	-0.089	-0.03
	(0.15)	(-0.21)	(-0.22)
GDP Per Capita $_t$	-0.127***	0.031	-0.128***
	(-3.09)	(0.48)	(-3.11)
Debt financing $_t$	0.877***	-0.847***	0.964***
	(7.14)	(-6.60)	(7.69)
Equity financing $_t$	0.332*	0.054	0.213
	(1.87)	(0.25)	(1.12)
Size $_t$	0.001	-0.534***	0.033
	(0.04)	(-13.79)	(1.36)
Cash flow $_t$	0.003**	0.001	0.002**
	(2.24)	(0.05)	(2.26)
Age $_t$	0.005	-0.005	0.005
	(1.24)	(-0.96)	(1.34)
Stage Dummy $_t$	-0.248***	-0.322***	-0.234***
	(-7.05)	(-5.66)	(-6.70)
Intercept	-2.664***	5.992***	-3.038***
	(-5.75)	(8.31)	(-6.46)
Year effect	Yes	Yes	Yes
Industry effect	Yes	Yes	Yes
N	3270.00	3202.00	3212.00
Loglikelihood	(4222.16)	(5255.51)	(4121.54)
R Square	0.4	0.36	0.41
Adjusted R Square	0.40	0.36	0.41

Note: The dependent variable is investment, measured for year t +1; independent variable and control variables for year t. CSRHet1 are predicted CSR value from the first stage of the 2sls model. Robust t-statistics corrected for clustering at the firm level are presented in parentheses. Significance level: † 0.1 * 0.05 ** 0.01 *** 0.001.

Table 2-10: Estimates of The Moderating Effect of Information Transparency on CSR-Investment Relationship

	ATTEN (<20%)	REPOR (<20%)	OVERS (<20%)	BIG4 (<20%)	FAC1	FAC2
	(1)	(2)	(3)	(4)	(5)	(6)
$CSRHet1_t$	0.042***	0.046***	0.044***	0.048***	0.053***	0.048***
	(4.98)	(5.52)	(5.26)	(5.75)	(6.30)	(5.74)
CFP_t	0.064	0.060	0.067	0.067	0.077	0.063
	(0.55)	(0.53)	(0.58)	(0.58)	(0.66)	(0.58)
GDP Per $Capita_t$	-0.087*	-0.108*	-0.092*	-0.101*	-0.115**	-0.095*
	(-2.01)	(-2.47)	(-2.10)	(-2.30)	(-2.63)	(-2.18)
Debt $financing_t$	0.897***	0.845***	0.881***	0.866***	0.832***	0.902***
	(7.28)	(6.77)	(7.11)	(6.91)	(6.71)	(7.24)
Equity $financing_t$	0.354*	0.377*	0.353*	0.360*	0.362*	0.369*
	(1.98)	(2.10)	(1.97)	(2.01)	(2.02)	(2.04)
$Size_t$	-0.055+	-0.047	-0.047	-0.050+	-0.061*	-0.055+
	(-1.85)	(-1.57)	(-1.54)	(-1.66)	(-1.99)	(-1.81)
Cash $Flow_t$	0.003*	0.003*	0.003*	0.003*	0.003*	0.003*
	(2.36)	(2.32)	(2.19)	(2.20)	(2.13)	(2.34)
Age_t	0.007+	0.004	0.006	0.006	0.006+	0.006+
	(1.84)	(1.07)	(1.64)	(1.47)	(1.74)	(1.74)
State $Dummy_t$	-0.233***	-0.248***	-0.249***	-0.252***	-0.249***	-0.237***
	(-6.64)	(-7.00)	(-7.10)	(-7.14)	(-7.05)	(-6.74)
$ATTEN_t$ (< 20%)$_t$	-1.469***					
	(-6.57)					
$ATTEN_t$ (< 20%) *CSR_t	0.031***					
	(5.18)					
$REPOR_t$ (< 20%)		-0.631**				
		(-2.73)				
$REPOR_t$ (< 20%) *CSR_t		0.016**				
		(2.63)				
$OVERS_t$ (< 20%)			-1.228***			
			(-4.51)			
$OVERS_t$ (< 20%) *CSR_t			0.030***			
			(3.97)			
$BIG4_t$ (< 20%)				-0.726**		
				(-2.80)		
$BIG4_t$ (< 20%) *CSR_t				0.015*		
				(2.28)		
$FAC1_t$					0.080	
					(1.29)	
$FAC1_t$ *CSR_t					-0.000	
					(-0.23)	

$FAC2_t$						0.380*** (5.69)
$FAC2_t$ *CSR_t						-0.009*** (-5.01)
Intercept	-2.592*** (-5.64)	-2.637*** (-5.67)	-2.740*** (-5.90)	-2.775*** (-5.94)	-2.882*** (-6.15)	-2.884*** (-6.23)
N	3270	3270	3270	3270	3270	3270
Loglikelihood	-4188.78	-4223.32	-4211.51	-4219.64	-4216.13	-4206.86
R Square	0.41	0.40	0.41	0.40	0.40	0.41
Adjusted R Square	0.41	0.39	0.40	0.40	0.40	0.40

Note: The dependent variable is the investment, measured for year t +1; independent variable and control variables for year t. CSRHet1 predicted value of CSR from the first stage of 2SLS regression. ATTEN is a dummy variable if the industry-level mean of the firm number of analysts' attention is smaller than twenty-quantile of this variable, we code it as 1, otherwise 0. REPOR is a dummy variable if the industry-level mean of the firm number of analysts' reporting is smaller than twenty-quantile of this variable, we code it as 1, otherwise 0. OVERS is a dummy variable if the industry-level sum of firms with oversea auditing firms is smaller than twenty-quantile of this variable, we code it as 1, otherwise 0. Big 4 is a dummy variable if the industry-level mean of firms with Big 4 auditing firms is smaller than twenty-quantile of this variable, we code it as 1, otherwise 0. CSRHet1 are predicted CSR value from the first stage of the 2sls model. Robust t-statistics corrected for clustering at the firm level are presented in parentheses. Significance level: † 0.1 * 0.05 ** 0.01 *** 0.001.

Figure 2-1: Theoretical Framework

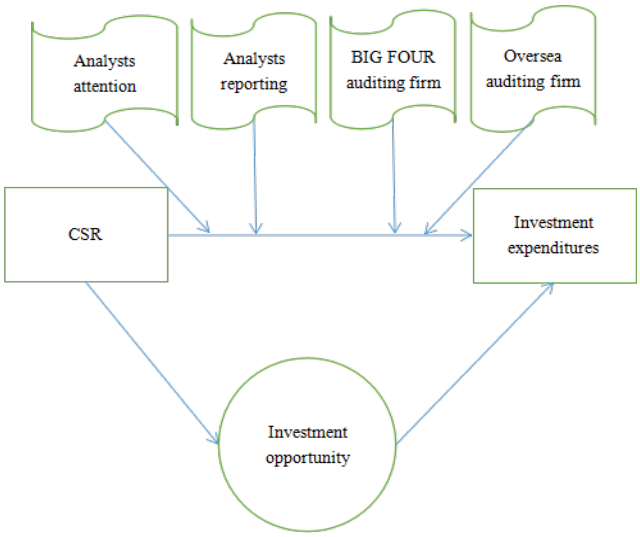


Figure 2-2: Interaction Effect of Analysts Attention and CSR on Investment

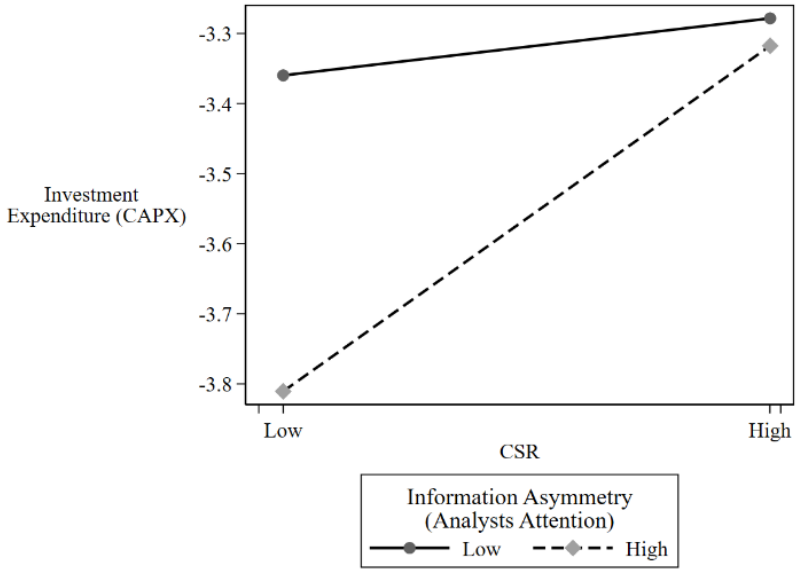


Figure 2-3: Interaction Effect of Analysts Reporting and CSR on Investment

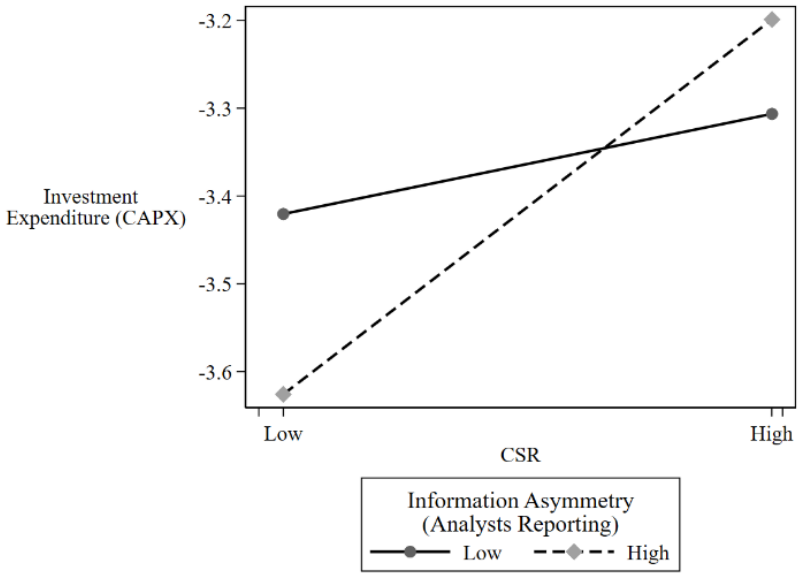


Figure 2-4: Interaction Effect of Oversea Auditing and CSR on Investment

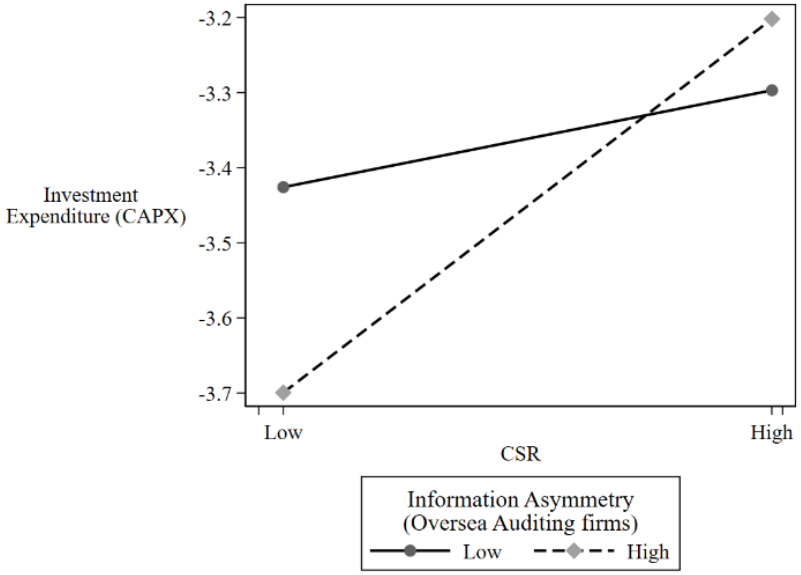
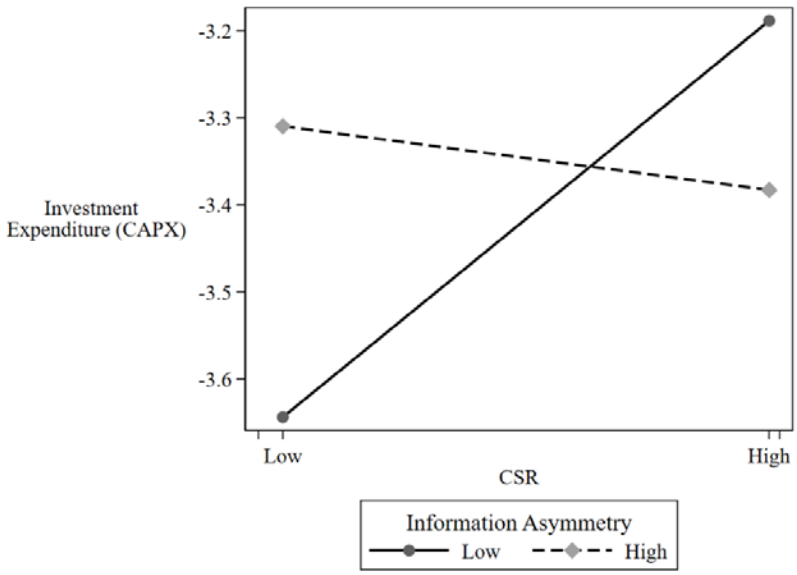


Figure 2-5: Interaction Effect of the Principal Component of Oversea Auditing and Big 4 and CSR on Investment



Appendix Table 2-1: Variables Description

Variables	Description	Resource
DV: Firm's Investment	Cash payment (yearly growth) for fixed assets, intangible assets, and other long-term assets from the cash flow statement scaled by the beginning book value of total assets. We use the log of this value in our regression analyses.	(McLean et al. 2012); (Gulen and Ion 2015); (Chen et al. 2011); (Chen et al. 2017) Data from CSMAR database
Alternative Investment	Cash payment (yearly growth) for fixed assets, intangible assets, and other long-term assets from the cash flow statement scaled by the beginning book value of net fixed assets.	Data from CSMAR database
IV: Corporate Social Responsibility	The score of CSR investment.	(Marquis and Qian 2014) Data from Rankins CSR Rating (RKS) database
Moderating variables		
Analysts' attention	The industry-level mean of firm's analysts' attention	(Wang, Cao, and Ye 2018) Data from CSMAR database
Analysts' reporting	The industry-level mean of firm's analysts' reporting	(Wang et al. 2018) Data from CSMAR database
Big Four Dummy	The industry-level sum of the firm's auditing firm from Big 4	(Li et al. 2019) Data from CSMAR database
Oversea Audit Dummy	The industry-level sum of the firm's auditing firm from oversea	(Li et al. 2019) Data from CSMAR database
Mediating Variable: Investment opportunity (Tobin's Q)	The market value of equity, the book value of non-tradable shares and liabilities, divided by book value of total assets.	(Chen et al. 2011); (McLean et al. 2012); (Bhandari and Javakhadze 2017); (Gulen and Ion 2015) Data from CSMAR database
Control variables:		
Financial performance	Earnings before interests, taxes, depreciation, and amortization scaled by total asset.	(Paeleman and Vanacker 2015) Data from CSMAR database
Debt financing	Yearly change of debt issuance scaled by beginning total assets.	(McLean et al. 2012); Data from CSMAR database
Equity financing	Yearly change in book equity minus the change in retained earnings, all scaled by beginning assets.	(McLean et al. 2012); Data from CSMAR database
Size	The log of the number of firm employees.	Data from CSMAR database
Cash flow	Net income plus R&D and depreciation and amortization, all scaled by the beginning of the year's book value of assets.	(McLean et al. 2012); (Bhandari and Javakhadze 2017); (Chen et al. 2011); Data from CSMAR
Alternative cash flow	Net income plus R&D and depreciation and amortization, all scaled by the beginning of the year's book value of fixed assets.	Data from CSMAR
Age	Observation year minus IPO year	Data from CSMAR
State Ownership	A dummy variable: if State control 1; otherwise 0.	Data from CSMAR
GDP Per Capita	Total Gross Domestic Production divided by the total number of people in a certain province.	Data from WIND
Year effect and industry effect	The dummy variable of year and industry (Chinese Securities Regulatory Commission (CSRC) industry code with two-digit Specification).	Data from CSMAR

CHAPTER3: Benefits of Walk the Talk: How CSR experience developed at home influence EM-SOEs' location portfolio of international investment

ABSTRACT

Building on the emerging importance of corporate social responsibility (CSR) to the overall strategy of firms, this paper explores the role of CSR in firm-level experience development and its reflection on the firm's internationalization performance. In a dual of home-host setting, this study examines how CSR capability helps emerging market state-owned enterprises (EM-SOEs) to offset the legitimacy liabilities of investing abroad. Based on springboard viewpoint and absorptive capacity, we argue that in order to be able to enter into the developed host countries for asset and knowledge access, EM-SOEs need to engage in CSR activities at home to develop their managerial awareness and organizational capabilities in meeting the stringent expectations of the stakeholders in those developed economies. We further argue that EM-SOEs can more efficiently develop CSR experience through engaging in CSR activities at home in a manner with larger intervals and through focusing on limited dimensions of CSR activities; the developed CSR experience through CSR activities at home can be less useful when entering the host country with more considerable institutional distance. Nevertheless, EM-SOEs with stronger international experience can better utilize the CSR experience in adding host countries of high CSR requirements into their location portfolio. Based on a sample of all Chinese publicly listed SOEs between 2009 and 2015, we found support for our arguments.

Keywords: CSR experience; legitimacy; SOEs; emerging market

INTRODUCTION

Studies on foreign direct investment (FDI) have long argued that each country has economic, institutional, and cultural barriers (Johanson and Vahlne 2003). These barriers include information asymmetries and transaction costs, lack of access to local resources (Hymer 1976), distance impeding decision making (Kindleberger 1969), which will generate liabilities of foreignness for MNEs to restrain their entry into the host market (Nachum 2003; Zaheer 1995). Correspondingly, firms have to possess valuable resources and capabilities, such as technologies, brand names and other know-how knowledge in order to climb these market barriers (Dunning 1993; Johanson and Vahlne 1977; Tseng, Tansuhaj, Hallagan and McCullough 2007).

Nowadays, MNEs face new legitimation challenges from social and environmental issues (Johanson and Vahlne 2009; Lundan 2010; Rodriguez, Siegel, Hillman, and Eden 2006); for example, studies have proposed that firms need the “social-license-to-operate” (SLO) (e.g., Gunningham, Kagan and Thornton 2004). With the advent of an intergovernmental organization, the United national Guiding Principles (UNGP), SLO began to move beyond the scope of social and human rights and touch the border concept of CSR concerns (Buhmann 2016). As the adverse effect of transnational economic behavior from MNEs becomes salient in different countries, SLO has become an important issue that forms an agenda in governmental regulation which constitutes soft, hard, and mixed forms of enforcement (Buhmann 2016). The process of gradually incorporating a more regulated, enforced, and legal action into SLO indicates that global stakeholders have intensely perceived the social and human rights concept or, in a broader sense, CSR concept. MNEs, therefore, may face the increasing level of challenges in terms of social value evaluation or business conduct standards required by host-country stakeholders (Klein, Ettenson, and Morris 1998; Mellahi, Demirbag, and Riddle 2011; Meyer, Mudambi,

and Narula 2011).

Facing these non-market barriers of host countries, we believe that MNEs need to possess similar non-market experience in order to be able to overcome these barriers. It has been argued that firms are heterogeneous with regards to the non-market experience, result in making different strategic choices and achieving different levels of performance (Boubakri et al. 2013; Claessens et al. 2008; Faccio 2006; Faccio et al. 2006; Leuz and Oberholzer- Gee 2006). In order to be able to enter the host countries with higher non-market barriers, such as a higher level of corporate social responsibility (CSR) requirements, MNEs need to develop to some extent non-market experience, such as CSR experience, at home.

Such tension is particularly salient for emerging market state-owned enterprises (EM-SOEs), as they face additional legitimation challenges to enter foreign markets from a weak legitimacy of "state ownership." For example, they are more often perceived as less caring socially and environmentally responsible issues (Doh, Husted, and Yang 2016; Kostova and Zaheer 1999; Marano, Tashman and Kostova 2017), obtaining unfair competitive advantage and potential threats to national security because of support from the home government (Cui and Jiang 2012; Meyer, Ding, Li, and Zhang 2014). Besides, EM-MNEs generally lack experience and information in dealing with social and environmental issues, as the administrative requirements for CSR are often relatively lower in emerging markets (Lee 2011; Yang and Rivers 2009; Reiman, Rauer, and Kaufmann 2015), and they are latecomers in international markets (Coervo-Cazurra and Ramamurti 2014). Our study investigates how CSR experience as one crucial dimension of non-market experience developed at home influences EM-SOEs' location choice.

Given the institutional voids in emerging economic context (Khanna and Palepu 1997; Marano, Tashman, and Kostova 2017), EM-MNEs are likely to escape their institutional environment and use internationalization as a springboard to acquire strategic resources in the host country and compensate

their capability void, which eventually increase their global competitiveness (Li, Li and Shapio 2012; Luo and Tuang 2007, 2018). However, the advanced technological capability and know-how experience in the developed institutional environment also requires a higher level of CSR standards (Baughn, Bodie, and McIntosh 2007). As such, Chinese firms may face a stringent legitimacy challenge from host countries due to their lack of experience and time in engaging CSR in their home country (Yang and Rivers, 2009; Reiman et al. 2015. We, therefore, suppose that faced with such legitimacy challenges in the eyes of more developed host-country stakeholders, firms in the emerging market need to engage in CSR activity to overcome host-country institutional requirements and pursue their strategic asset-seeking and knowledge-seeking motivation in more developed economies (Gaffney, Karst, and Clampit 2016; Gubbi and Elango 2016).

Prior studies have highlighted the importance of CSR activities for MNE to overcome these legitimation challenges (e.g., Campbell, Eden and Miller 2012; Husted, Montiel, and Christmann 2016; Rathert 2016). However, all these studies emphasize the CSR activities in the host country but ignore the other part of the picture that EM-MNEs need to deal with legitimacy challenges in the eyes of international stakeholders in order to fulfill their motivation of entering host countries with high CSR requirements. We build the link between the CSR activities at home and CSR expectations of stakeholders at the host country by arguing that EM-MNEs like Chinese MNEs need to engage in CSR activities intensively to demonstrate their capability and motivation to live up to the expectations of developed host-country requirement. Furthermore, such capability is essential in overcoming global stakeholders' legitimacy challenges before they invest in more developed foreign countries. Indeed, it is not rare that poorly perceived or implemented CSR activities can diminish stakeholders' perceptions (Tichy, McGill, and Clair 1997), and achieving legitimacy depends on firms' abilities to identify,

comprehend, and respond to the demands of local stakeholders (Gardberg and Fombrun 2006). On the one hand, CSR experience is path-dependent (Hart 1995; Hart and Dowell 2011) that "lack of investment in an area of expertise early on may foreclose the future development of a technical capability in that area" (Cohen and Levinthal 1990: 128).

On the other hand, CSR is a global issue in nature that shows considerable varieties across locations (Rodriguez et al. 2006), not only in stakeholder expectations and government approaches (Kolk and Pinkse 2008) but also in the locus and scope of potentially significant, unpredictable impacts (Stern 2006). MNEs from more different regulatory environments, especially for EM-SOEs, should, therefore, have less experience to comply with social requirements in the host country (Campbell, Eden and Miller 2012). As a result, investment in countries with a higher level of CSR requirement requires firms' stronger motivation and capability of engaging in CSR to successfully achieve legitimacy from stakeholders at the host market.

In this study, we use EM-SOEs as the theoretical sample. We argue that in order to achieve legitimacy from stakeholders at the host country with a higher level of CSR requirements, EM-SOEs need to possess CSR capability to identify, meet and even exceed societal expectations concerning concerns about the social and environmental issues at the host countries. Based on a dynamic learning perspective (Teece, Pisano, and Shuen 1997), CSR capability, as path-dependent and embedded capabilities, are socially complicated and specific to organizations so that EM-SOEs need to engage in CSR activities in advance at home to develop CSR experience before they go abroad. We argue that the more efforts invested in CSR activities at home, the more opportunities to go through the stakeholder expectations' identification and delivery process, which leads to the stronger CSR capability developed by EM-SOEs. Such experience can better help them deal with the expectations of stakeholders in order

to be able to enter the host country with a higher level of CSR requirements.

We further argue that if firms conduct CSR activities more strategically, they can develop more CSR experience through engaging in the same intensity of CSR efforts in a focused and consistent manner. We also point out the constraining conditions of CSR experience developed at home institutional environments. Because of the context-specific nature of CSR issues (Campbell, Eden and Miller 2012), we find the effect of CSR experience developed based at CSR activities at home is less effective in the host country with more considerable institutional distance, as there might be higher possibilities the CSR requirements and expectations are different in the different institutional environment. However, such constraining effect because of context-specific challenges will reduce if EM-SOEs possess secure international experience so that they can better utilize their developed home-based CSR experience in an international context.

Our study has three main contributions to the CSR and internationalization of EM-SOEs literature. First, our study advances understanding of the location choice of EM-SOEs by exploring the impact of CSR experience. We present one of the first studies focusing on the non-market barriers at the host country and investigating the impact of CSR experience on firms' entrance of the host countries with high non-market barriers. We argue that in order to achieve legitimacy from stakeholders to enter the host country with a higher level of CSR requirements, firms need to possess, to some extent, CSR experience to identify, meet and even exceed their expectations. Previous studies have considered the importance of firm-specific advantages to help firms overcome liabilities of foreignness (Eden and Miller 2004; Hymer 1960, 1976; Zaheer 2002); however, they mainly emphasize on market-based aspects, mostly based on the possession and use of certain intangible assets that arise from their production or marketing activities. We highlight the social dimension to facilitate firms'

internationalization.

Second, our study advances the learning perspective to CSR research by specifying how to develop CSR experience through engaging CSR activities at home (Hart1995; Hart and Dowell 2011). Through focusing on how to develop CSR capability, our study responds to the recent call to investigate how MNEs build up the learning process (Lundan and Li 2018). We argue that through engaging CSR activities at home, firms can develop managerial attention and awareness, and organizational capabilities in dealing with expectations of stakeholders. Moreover, we investigate how firms can efficiently develop CSR capability and explore under what conditions firms' CSR capability developed at home can be applied in international markets. We also shed light on the measurement of CSR performance of host country by using the entry into markets with higher CSR requirements as the indicator. The measurement of host-country CSR is exceptionally relevant to international business development as more and more countries are adopting Sustainable Development Goals (SDGs) and institutionalizing sustainability concerns.

Lastly, our study contributes to the recent research on the internationalization of EM-SOEs, especially on their legitimation challenges to enter foreign markets (e.g., Doh, Husted, and Yang 2016; Marano, Tashman and Kostova 2017). Prior studies emphasize on the CSR activities at the host market after EM-MNEs enter into the foreign markets. We switch the focus of CSR activities at the host country to the home country and focus on the pre-entry situation. Our study shows that engaging CSR activities at home are a crucial bridge to foreign markets with a higher level of requirements.

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Knowledge and strategic asset-seeking motivation of EM-SOEs' internationalization

The traditional OLI model suggests that firms process and utilize superior capability and managerial

resources to enter the foreign market. However, the emergence of Chinese OFDI seems not to comply with the model of OLI due to the absence of world-class managerial resources and capabilities (Barnard 2010), leading to the missing element of O (Gammeltoft, Barnard, and Madhok 2010; Mathews 2006). For example, Chinese firms experience the technological disadvantages in manufacturing industries such as semiconductor and engine field and the lack of managerial capacities (Peng, 2012). Facing these competitive disadvantages, EM-MNEs need to advance their know-how experience from a more developed economy and combine them with their original knowledge to improve their global competitive advantages (Luo and Tung 2007 2018). Thus, studies have proposed the springboard perspective Luo and Tung (2007 2018) to illustrate the phenomenon of emerging market firm's foreign investment from a knowledge-seeking motivation perspective, which is more appropriate for the Chinese market OFDI phenomenon that characterized as an aggressive nature (Kumar et al. 2019).

Springboard perspective posits that due to the lack of international experience and being the later comers of the global market, emerging-market firms may not effectively compete with global players who have longer international trajectories (Contractor, Kumar, and Kundu 2007). As a result, they have a stronger tendency and motivation to acquire strategic assets and obtain know-how experience from more developed economies with longer institutional distance (Gaffney, Karst, and Clampit 2016; Gubbi and Elango 2016) and compensate their capability voids in home country (Luo and Tung 2018). It is not an easy task per se for firms to get confirmed from international stakeholders due to the liability of foreignness and liability of origin. Therefore, in the following part, we will argue that EM firms need to develop their CSR capability to satisfy the challenges of legitimation before moving into the global market to achieve their knowledge-seeking and strategic asset-seeking motivation.

Legitimation Challenges and EM-SOEs' Internationalization

Most FDI theories assume that MNEs face the liabilities of foreignness that restrains their entry into the international market (Nachum 2003; Zaheer 1995). In more specific, the liability of foreignness includes the information asymmetries, transaction costs (Hymer 1976), distance impeding decision making (Kindleberger 1969), and lack of access to local resources (Hymer 1976). The sources of liabilities of foreignness identified so far are mainly from the market field. However, with the market complexities increasing, the global business landscape has changed so profoundly that MNEs face new legitimation challenges from social and environmental issues (Johanson and Vahlne 2009; Lundan 2010; Rodriguez, Siegel, Hillman, and Eden 2006).

In today's competitive business climate, the business faces increasing pressures from international stakeholders to take the initiative and recognize its social responsibilities (Carroll and Shabana 2010; Mohan 2006; Scherer and Palazzo 2008; Thorne et al. 2011; Torugsa, O'Donohue, and Hecker 2012). Increasingly more and more countries and regions mandate or specify certain aspects of CSR for firms to operate in their territories (Wang, Tong, Takeuchi, and George 2016). Furthermore, the CSR requirements show considerable varieties across locations - not only in stakeholder expectations and government approaches (Kolk and Pinkse 2008) but also in the locus and scope of potentially significant, unpredictable impacts (Stern 2006). As firms enter foreign markets, they face increased litigation risk from violating (unfamiliar) societal and regulatory requirements (Attig, Boubakri, Ghoul, and Guedhami 2016).

The issue of social-license-to-operate (SLO) becomes a way to respond to institutional challenges in new institutional environments from natural resources industries (Prno and Slocombe 2012; Prno and Slocombe 2012). Firms in natural-resource industries like mining or oil need to obtain SLO from host communities, a prerequisite to maintain a consistent acceptance from host-country stakeholders (Nelsen

2006). Due to the costs and potential risks incurred by EM-MNEs, the intergovernmental organization, UNGP, began to set formal standards towards CSR to solve the issue adverse effects of EM-MNEs activities (Buhmann 2016). In other words, the method UNGP uses to solve the adverse effects of EM-MNEs become more formalized as CSR implementation begin to subject to both soft (voluntary) and hard (compulsory) forms of action (Kinley and Nolan 2007). For instance, the UNGP requires the public authorities to protect business's SLO or CSR through smart, soft, and detailed guidance (Buhmann 2016), which forms the increased level of non-market challenges for EM-MNEs who want to search advanced host economies.

> *UNGP principle 3 and its commentary explain that states should not only enforce laws requiring companies to respect human rights. They should also ensure that corporate law and policies for setting up and operating businesses enable rather than constrain business respect for human rights. ... For example, states may provide guidance for companies on how to respect human rights and may complement this by encouraging or even requiring companies to communicate how they address their human rights impact. ... were adopted by both the EU for the 2011 Communication and the Danish government for its CSR communication requirements (2016: 711).*

These additional legitimation challenges from social and environmental issues are more salient for MNEs from emerging markets to enter into the foreign markets (Doh, Husted, and Yang 2016; Kostova and Zaheer 1999; Marano, Tashman and Kostova 2017; Pinkse and Kolk 2012; Ramachandran and Pant 2010). In general, emerging economies are latecomers in dealing with social and environmental issues because the administrative requirements for CSR are often relatively lower in emerging markets than the ones in developed markets (Lee 2011; Yang and Rivers 2009; Reiman, Rauer, and Kaufmann 2015). As a result, the EM-MNEs often lack the essential information and experiences in conducting CSR activities. For example, Chinese firms, in particular, have caused resentments in environmental

protection, in both Europe and the US, since their home countries have high pollution emission but no binding reduction targets (Pinkse and Kolk 2012). Among EM-MNEs, SOEs face even stronger legitimation challenges because the state ownership has been considered as channels to obtain unfair competitive advantage and potential threats to national security because of support from the home government (Cui and Jiang 2012; Meyer, Ding, Li, and Zhang 2014).

As a result of facing these legitimation challenges for EM-SOEs, they encounter higher barriers to enter into the foreign markets, especially the host country with higher social and environmental requirements. Prior studies have introduced CSR activities as an essential way for firms to overcome these legitimation challenges (e.g., Campbell, Eden and Miller 2012; Husted, Montiel, and Christmann 2016; Rathert 2016). However, previous studies emphasize the CSR activities in the host country and focus on the effect on firms after entering the host market. Promoted by developed market's know-how and strategic asset purposes, we argue that possessing CSR capabilities becomes essential in entering into host countries with stringent entry barriers and high stakeholder expectations.

CSR capability and Legitimacy

In a four-factor model of organizational learning proposed by Daspit and D'Souza (2013), exploitation is the final stage following acquisition, assimilation, and transformation. In the internationalization literature, exploitation means firms would find the right destination for the firm-specific advantages.

Although legitimacy could be a goal to attain for MNEs, it is not an inactive status; instead, according to the two main perspectives on legitimacy, strategic and institutional, the legitimation dynamics involves organizational efforts and is a result of interactions between the organization and the institutional environment (Suchman 1995). At the same time, CSR capability development that involves

how to strategically integrate, deploy, and orchestrate resources forms the basis of competitive advantage (Amit and Schoemaker 1993; Barney 1991). Despite the gradually accumulating empirical evidence on the existence of CSR-related capabilities, such as shared vision, stakeholder management and strategic proactivity (Torugsa, O'Donohue and Hecker 2012), the current international business literature has mostly ignored the CSR capability.

Legitimacy represents "an umbrella evaluation" that "transcends specific adverse acts or occurrences" (Suchman 1995: 574). Being aware of such acts or occurrences and, in particular, how to generate such social legitimacy could be one of the core capabilities that companies practicing CSR should acquire. Walking a fine line between theories and practices, the "social-license-to-operate" literature (e.g., Gunningham, Kagan and Thornton 2004) suggests that the collective expectations of stakeholders are the frontline of legitimacy. In the context of internationalization, to achieve legitimacy from stakeholders at the host country, it is arguable that EM-MNEs need to possess CSR capability to identify, meet and even exceed societal expectations for concerns about the social and environmental issues. However, EM-MNEs from more different regulatory environments usually have less capability to comply with social requirements in the host country (Campbell, Eden and Miller 2012). As a result, it is not always the case that EM-SOEs can successfully achieve legitimacy from stakeholders at the host market by merely following local CSR practices.

Business norms and standards, and stakeholder demand for CSR can vary substantially across regions and lines of business as well as across countries (Rodriguez, Siegel, Hillman, and Eden 2006). As a result, going international requires more experience in identifying and understanding the needs and expectations of stakeholders in the host country. At the same time, CSR requirements are also changing quickly (Attig et al. 2016), which pushes firms to keep up the changing pace. It is crucial to develop

managerial attention and awareness of CSR issues.

In addition to the experience of identifying the CSR requirements from local stakeholders, firms should also be able to deliver these requirements and meet the needs of stakeholders. For example, environmental protection requires the availability of physical and technological resources through redesigning their production process (Buchholz 1993). Human resource considerations are also highly involved in CSR practices (Husted and Allen 2006), as firms should cultivate employees' participation and cooperation in CSR. In summary, the experience of engaging in CSR is a common set of cognitive and managerial abilities that firms gained through the learning process in dealing with CSR issues.

The exploitation of CSR Capability

Such CSR capability cannot be taken for granted, as the ability to conduct the right CSR activities is often "path-dependent" and is "embedded" in the company's accumulated experience (Barney 1996; Hart 1995; Hart and Dowell 2011; Teece et al. 1997). The engagement in social, environmental, and governance issues are thus become a prerequisite to developing such CSR capability. Following this logic, we argue that through conducting CSR activities at home, EM-MNEs can develop their managerial attention and awareness, and organizational experience in dealing with expectations of stakeholders at the host country, which helps them obtain legitimacy to enter the host country.

The characteristics of the home country of EM-MNEs provide a good avenue for them to develop their CSR capability needed to achieve legitimacy from international stakeholders through engaging in CSR activities. Firstly, engaging CSR at home can help EM-SOEs develop sensing experience to identify the needs and expectations of various stakeholders. Engaging CSR can allow EM-SOEs to put CSR in a place of strategic importance within the firm's agenda and to align practices with stakeholder norms and expectations (Bansal and Kistruck 2006; Maignan and Ralston 2002; Young and Marais

2012). In this case, a higher level of CSR investments at home means that the firm puts CSR at priority in its strategic agenda, which gives its managers a deeper understanding of a situation and a clearer picture of what they should do (Wright et al. 2013). The characteristics of emerging markets can also provide an avenue for firms to quickly and effectively develop their CSR capability when they engage in CSR activities. Chan, Makino, and Isobe (2010) argue that there are more considerable variations within countries at emerging markets, which makes firms face different institutions and requirements of CSR policies and priorities. Engaging CSR activities in such diverse institutional environments allows EM-SOEs to practice how to effectively manage different stakeholders and institutional pressures (Lundan and Li 2018). This experience developed in diverse institutional environments may also help the EM-SOEs realize the relative importance of diverse stakeholders' expectations and practice their stakeholder expectations' sensing capability in more developed host countries (Greenwood, Raynard, Kodeih, Micelotta, and Lounsbury 2011).

It also has been argued that the institutional environment in the emerging market is far away from stable (Haveman et al. 2016). Facing this dynamic and complex environment, firms can practice their skills in interpreting CSR policy and developing programs based on their interpretation of salient stakeholders and the requirements of their CSR policy and strategy (Cantrell, Kyriazis, and Noble 2014). Such experience of engaging CSR at home can make EM-SOEs' managers more sensitive to different stakeholder expectations, and by extension, able to detect and correctly interpret illegitimacy risks and take action to combat them (Marano, Tashman, and Kostova 2017). Due to dynamic changes, EM-SOEs can also have more opportunities to go through the stakeholder expectation sensing process more frequently. This process of sensing the stakeholder expectation is likely to foster organizational learning and the accumulation of experiential knowledge that gets stored in organizational processes and routines

(Nelson and Winter 1982; Zhou and Guillen 2015) that in turn become the building blocks of the learning process (Lundan and Li 2018).

Secondly, through engaging CSR at home, EM-SOEs develop the organizational capacity to deliver the needs and expectations of various stakeholders. Through engaging CSR activities at home, the top management team would emphasize its desire to all staff and provide them with suitable training (Hart 1995; Shrivastava 1995). The process of training and firm-level emphasis will likely cultivate the knowledge about social and environmental issues (Ashford 1993), which will be potentially useful in foreign subsidiaries. The higher level of engagements in CSR also means possibly more CSR related training and practice opportunities for their employees at home, which increases employees' abilities in understanding, planning, and implementing CSR activities. Through engaging in CSR activities, EM-SOEs can develop deepened environmental knowledge, developed technologies, and improved competence in addressing environmental issues (Dean and Brown 1995; Groenwegen and Vergragt 1991). Engaging in CSR activities consumes time and resources (Tang, Hull, and Rothenberg 2012), as firms from emerging markets typically lack resources and capabilities, failure of putting CSR in firms' strategic agenda may hinder the organizational CSR learning process.

Previous literature suggests that substantial CSR programs are not easy to implement. It might require expensive and risky investments in new equipment and processes (Bansal and Kistrick 2006), a high level of expertise and knowledge on the specifics of these practices, and, more importantly, how to design and implement these actions (Marano, Tashman, and Kostova 2017). Due to the path-dependence nature of organizational learning, the organizational experience in addressing CSR issues and requirements, firms need to invest and develop in such capability in advance. In this situation, the higher level of engagements in CSR at home allows firms to invest more resources in developing social and

environmental related technologies. The availability of physical and technological resources will enhance manufacturers' ability to prevent environmental pollution by redesigning their production process (Buchholz 1993). To satisfy the demand for CSR, firms have to devote resources and capability will be developed in this process. For instance, additional capital on pollution control equipment would help to achieve an environmental standard beyond that required by the law (McWilliams and Siegel 2001). As a result, EM-SOEs can develop more organizational capacity to meet the higher expectations and requirements of stakeholders at the host market.

In sum, engaging CSR activities at home can promote firms' CSR experience, which equips EM-SOEs with the skillset to achieve the legitimacy of international stakeholders by identifying and meeting their needs. For EM-SOEs, if they want to enter into host countries with higher levels of CSR requirements and standards, they need to develop more CSR capability at home through a higher level of engagements in CSR activities.

Hypothesis1: *The more efforts invested in CSR activities at home, the more likely EM-SOEs can enter the host countries with higher CSR requirements.*

The Development Process of CSR Capability at Home

The development of a firm capability of CSR often involves long-term efforts, where the process of development becomes relevant. Previous studies in the international expansion area have identified temporal patterns that may result in different levels of economic performance (e.g., Vermeulen and Barkema 2002). The effectiveness of developing CSR experience could be affected not only by how much the firm spend on CSR by targeting environment and social performance, but also by the pattern of spending. Firms investing in CSR activities frequently face decisions on whether and how to spread the budget across different CSR themes and projects over time.

Being aware of the many aspects of impacts a firm could have, the expectations of stakeholders on the firm are increasing. It is up to the firm to prioritize some area(s) of CSR and even create expertise in these areas. The strategic school of CSR argues that firms must align their CSR efforts with their core business and concentrate on specific vital themes instead of dispersing the money all over the place. As different dimensions of CSR differ significantly (Porter and Kramer 2002), simultaneously engaging in different dimensions makes EM-SOEs challenging to understand the requirements of the collection of operations and to respond to demands appropriately. Meyer and Scott (1983) argue that the diversity and inconsistency of an organization's accounts will negatively affect how it is to function. Hence, the moderating effect of the scope of CSR activities on the relation between CSR investment and the likelihood of the firm entering a high-CSR-standard host country is negative.

Hypothesis 2a: *The positive relationship between CSR investments at home and the likelihood of EM-SOEs entering host countries with higher CSR requirements is weaker if the firm disperses its CSR efforts in a wider scope of themes.*

Based on a dynamic capability perspective, to better develop the CSR experience from CSR engagement, MNEs need first to absorb the diverse knowledge and then to recombine it with their established knowledge base (Lundan and Li 2018), which usually takes time. A larger interval after intensive CSR engaging (instead of consistent CSR investments) can allow EM-MNEs to take time to digest and reflect what they have learned and developed. In contrast, a consistent investment manner may overstretch top managers' absorptive capacity and push them to cognitive limits that inhibit efficient learning and capacity building (Vermeulen and Barkema 2002).

Besides, due to the limitation of the firm's absorptive capacity (Cohen and Levinthal 1994), even if a firm is rich in resources, it is hard for the firm to maintain a constant rate of conversion from

investment to experience. So that firms can better be focusing on absorbing and developing experience through some “off” time. To better leverage the CSR investment, such investments would appear to be irregular. Hence, we expect that the irregular temporal pattern of CSR investments would be a more effective way of capability building through CSR, in particular when the engagement level is high.

Hypothesis 2b: *The positive relationship between CSR investments at home and the likelihood of EM-SOEs entering host countries with higher CSR requirements is stronger if the firm has taken a longer interval between CSR investments (that appears to be a more irregular temporal pattern or lack of rhythm).*

The utilization of CSR experience developed at home in internationalization

Above, we have argued that how EM-SOEs efficiently develop CSR experience needed through engaging in CSR activities at home to enter into the host country with higher CSR requirements. However, CSR is a global issue in nature that shows considerable varieties across locations (Rodriguez et al. 2006), there might be dissimilar regulatory environments for social and environmental requirements in different countries (Campbell, Eden and Miller 2012). Based on RBV, a resource or capability that is valuable in a particular context might fail to have the same value in a different context (Collis and Montgomery 1995:120). We would argue that the extent to which a firm can benefit from its internationalization depends on the benefits they will perceive from previous experience.

On the one hand, previously possessed international experience may help EM-SOEs better understand the host-country stakeholders’ needs and expectations due to the stronger sensing capacity of diverse needs from different stakeholders. On the other hand, previously developed CSR experience may have a dampening effect due to the decreased level of marginal return.

The constraining effect of more significant institutional distance between home and host country: a

legitimacy challenge view

Institutions across countries vary in how they shape firms' CSR practices that issue salience and stakeholder power could be very different in a given issue field (Rathert, 2016). Considering the path-dependent nature of CSR experience (Hart 1995; Hart and Dowell 2011), CSR experience developed through engaging CSR activities back at the home country are mainly responding to the social, environmental, and governance issues based on home country institutional environment, so that we can argue CSR experience is context-specific. As prior international business literature argued, the knowledge generated in one context has less applicability when applied across borders (Delios and Beamish 2001; Madhok 1997), which also applies to CSR knowledge. In this situation, if EM-SOEs aim to enter the host country with more significant institutional distance, they may face significantly different CSR demands and preferences, where they find it will be more challenging to utilize their home-based CSR experience in the host country.

Rodriguez and his colleagues (2006) have argued that business norms and standards, and stakeholder demand for CSR practices can vary substantially among countries with different institutional environments. Even though through engaging CSR activities at home, EM-SOEs have developed their managerial attention and awareness in dealing with expectations of stakeholders at the host country, their skills and experience in identifying stakeholders' needs are based on their interpretation of salient stakeholders and requirements of CSR policies at the home institutional environment. The significantly different preferences and demands from stakeholders at the host country with more significant institutional distance may challenge firms' abilities to interpret their needs, even though they have such awareness and motivations to do so. Besides, the organizational experience to deal with the expectations of stakeholders at the home country may not be able to be utilized in the host country with different

institutional environments. For example, the investment in new environmental technologies based on home institutional requirements may not be accepted by the host country stakeholders with more significant institutional distance.

Hypothesis 3a: *The positive relationship between the efforts invested in CSR activities at home and the likelihood to be able to enter the host countries with higher CSR requirements becomes weaker if the EM-SOEs are entering the host country with more significant institutional distance.*

The prompting effect of more significant institutional distance between home and host country: a springboard view

However, from the CSR motivation aspect, the springboard perspective suggests that EM-MNEs are more likely to enter developed host countries with advanced technology and experience (Luo and Tung 2007, 2018). Because developed host economies may provide them with more advanced technology, branding strategy, international governance, and knowledge (Dau, 2013), EM-MNEs could combine this advanced knowledge with their original capability and more effectively compete with global competitors and overcome the drawback of latecomers (Kedia, Gaffney, and Clampit 2012; Li, Li, and Shapiro 2012). As the institutional development level difference such as economic freedom, social and technological development correlates with CSR requirement difference (Baughn et al. 2007), countries with advanced institutional development may also have a higher level of CSR requirement. The motivation of EM-MNEs' CSR engagement in the home country is to increase their social legitimacy in the eyes of host-country stakeholders and enter the host country with higher CSR requirements. From this perspective, the longer the institutional distance, the more these EM-SOEs will feel that it is imperative to enter host countries with longer institutional distance with higher CSR requirements. We infer that *ceteris paribus,* the efforts of host-country CSR–host country CSR

requirement relationship will be stronger. Therefore, we hypothesize:

Hypothesis 3b: *The positive relationship between the efforts invested in CSR activities at home and the likelihood to be able to enter the host countries with higher CSR requirements will be stronger if the EM-SOEs are entering the host country with more significant institutional distance.*

The facilitating effect of prior international experience: a legitimacy challenge view

Prior international experience has been considered as an essential capability to help firms to adapt to the host market (e.g., Delios and Beamish 2001; Kostova 1999). We argue that prior international experience can help EM-SOEs better understand the host country situation, which allows EM-SOEs to better adapt their home-based CSR experience in the new context. Prior international exposure allows firms to develop an experience of dealing with different customers, political frameworks, institutions, rules and norms (Zhang, Li, and Zhou 2010), which helps them to develop an experience of adapting their established organizational routines into the new context (Corredoira and McDermott 2014). Following this argument, we believe that prior international experience can facilitate EM-SOEs to utilize better their home-country based CSR experience in the international market.

Prior international entry experience allows EM-SOEs to experience the process of entry, which includes the process of obtaining the legitimacy and license of the stakeholders in the host country. Even though EM-SOEs may enter a different host country, prior experience of communicating and interacting with host stakeholders gives them knowledge of how to better understand and identify the needs of local stakeholders in the new market. Companies with more international experience tend to have managers who are more cognizant of cross-cultural differences (Anderson and Gatignon 1986). They are, therefore, more likely to have competence in developing and implementing appropriate CSR programs that fall within the range of acceptability in the eyes of local stakeholders (Gardberg and Fombrun 2006). In this

condition, EM-SOEs can better apply their home-based CSR experience based on the new context. Besides, the successful entry experience may have pushed EM-SOEs to develop organizational capabilities in dealing with social and environmental requirements at international standards.

Hypothesis 4a: *The positive relationship between the efforts invested in CSR activities at home and the likelihood to be able to enter the host countries with higher CSR requirements becomes stronger if the EM-SOEs possess international experience.*

The constraining effect of prior international experience: a springboard view

The view of international springboard suggests that due to the benefits of entering host counties with technological capabilities, know-how knowledge (Gubbi, Aulakh, Ray, Sarkar, and Chittoor 2010; Luo and Tung 2007, 2018), EM-MNEs will likely to be attracted into these economies. However, the more firms get involved in the global market with higher technological advantages, know-how experience, the fewer benefits they will receive from such internationalization because firms may be locked into the predetermined trajectories with dampened marginal benefits (Bruton, Oviatt, and White 1994). This phenomenon prevails in a firm's internationalization in terms of first-mover behavior and catch-up strategy (Eriksson, Johanson, Majkgård, and Sharma 2000; Lorenzen and Mudambi 2012; Mueller 1997).

Therefore, compared with firms with previous international experience, strongly institutional embedded firms may feel that it will be more imperative to engage in internationalization and learn new know-how experience in developed economies than those firms who have already been to those countries. We, therefore, argue that the previous international experience will likely have a dampening effect on firms' tendency of internationalization and negatively impact the home CSR – host country CSR requirement. In other words, firms with higher CSR engagement in the home country will likely

choose the home country as their operating preferences instead of entering a host country with high CSR requirements. Therefore, the positive relationship between home-country CSR and host-country CSR requirement becomes weaker for firms with previous international experience. We thus hypothesize:

Hypothesis 4b: *The positive relationship between the efforts invested in CSR activities at home and the likelihood to be able to enter the host countries with higher CSR requirements becomes weaker if the EM-SOEs possess previous international experience.*

DATA AND METHODS

Sample and Data

Our panel dataset comprises OFDI by publicly listed SOEs from Shanghai and Shenzhen Stock market in China from 2010-2016. China is the third-largest country of OFDI after the United States and Japan since 2010 (Pan et al., 2014). At the same time, Chinese SOEs play an active role in the international arena (Benito, Rygh, and Lunnan 2016), which have attracted scholars' attention (Cuervo-Cazurra, Inkpen, Musacchio, and Ramaswamy 2014). As Chinese SOEs face legitimacy challenges (Cui and Jiang 2012; Meyer, Ding, Li, and Zhang 2014), it is thus interesting and appropriate to use Chinese SOEs to investigate how CSR may determine a firm's foreign investment location choice in China context.

We firstly focus on firms' newly-established foreign subsidiaries in a particular year (Xia, Ma, Lu, and Yiu 2014). We collect this information from the firms' annual reports. We then identify the location of the newly established foreign subsidiaries. We drop firms' foreign subsidiaries with a destination of Hong Kong, Macau, and Caribbean tax havens (Bermuda, Virgin Island, and Cayman Island) because the motivation of investing in those places may be tax considerations (Hampton and Christensen 2002).

Among 926 newly established OFDI by SOEs between 2010 to 2016, we have 109 state-owned enterprises who do foreign investment projects in different years, and they also may have multiple OFDIs in different locations in one specific year. As shown in Table 3-1, 76 countries are destinations of Chinese SOEs, with the United States, Singapore, Australia, Germany, Canada ranked as the five top destinations of Chinese SOEs' OFDI. Japan, France, for example, are followed.

[Insert Table 3-1 about here]

We integrate our dataset with data sources, including China Stock Market and Accounting Research (CSMAR) database as the primary data source, China Statistic Year Book, WIND database and Rankins CSR rating (RKS), an independent third-party agency that dedicated to the evaluation of corporate socially responsible behavior. From the Social Sustainability Index (SSI) database, we obtain the level of host-country CSR requirements. We also include host-country variables from the Global Competitiveness Index Historical (GCI) Dataset[19].

Our dataset comprises 926 firm-year observations from 76 countries, with 622 and 304 observations for foreign investment projects in developed and developing countries, respectively. After screening out missing observations of SOEs who do not engage in CSR activities, our final dataset consists of 525 firm-year-location observations during 2010-2016. We lagged one year for all independent variables to avoid possible reverse causality issues or endogeneity.

Measurements

Dependent variable

We use the Social Sustainability Index (SSI) database[20] as the measure of a host country's CSR

[19] The website can be obtained from Appendix Table 3-1.

[20] The website can be obtained from Appendix Table 3-1.

requirements. This index evaluates the host country's social wellbeing from the human, environmental and economic aspects. For each aspect, it has several specific items to display the host country's emphasis on the general socially responsible issue. In sum, the host-country social responsibility index constitutes a composite reflection of three aspects within 21 sub-items. We calculate the arithmetic mean value of these three prominent aspects to represent the host country's CSR requirement level.

Independent variables

The level of CSR efforts. We measure the invested efforts in CSR activities at home based on the score of CSR ratings from the Rankins (RKS) database. RKS is an independent third-party of the CSR rating agency. It evaluates firms' corporate social behavior from three main dimensions within 63 sub-items, which reflect the efforts companies invest in their CSR activities. We use the score of CSR from this database as the measurement of investment of CSR effort of Chinese SOEs, which is an accredited representation of CSR effort invested by a firm (Marquis and Qian 2014). In the robustness check part, we perform Two-stage least square (2sls) regression analyses to guarantee endogeneity caused by omitted variables does not drive our results. In the first stage of 2sls, we re-estimate the predicted value of CSR as a function of the firm-, industry-level variables and selected instrumental variables (city green space percentage, green space per capita and industry-level CSR are instrumental variables for the CSR score prediction in the first stage of 2sls modeling). We then use this predicted CSR from the first stage of 2sls as the new independent variable in checking the relationship between home country CSR and host country CSR requirements in the second stage.

Moderating variables

CSR Scope

This variable indicates the extensiveness of CSR activities a firm engages in. CSR dimension is

uncorrelated parts of overall CSR rating in previous literature (Hull and Rothenberg 2008; Marquis and Qian 2014; Mcwilliams and Siegel 2000; Orlitzky, Schmidt, and Rynes 2003; Russo and Fouts 1997; Waddock and Graves 1997). Directly comparing cross-sectional firms fails to take into consideration the firm's heterogeneity issue (Brav, 2009). For the issue of CSR, firms in different industries may have different tendencies and motivations to engage in CSR (Koh, Qian, and Wang, 2014). Following the method from Paeleman and Vanacker (2015), we generate our measurement of CSR scope as a dummy variable, coded as 1 when the sum of its 12-item CSR engagement dummy is above the sub-industry mean values in a specific year, otherwise 0.

CSR Rhythm

This variable shows the level of systematic, consistent, and regular changes in terms of a firm's CSR activity during a period. Following the work from Vermeulen and Barkema (2002), we measure the firm's engagement pattern of CSR as the rhythm, which is the kurtosis of its CSR score within each observation panel (Tang, Hull, and Rothenberg 2012). The higher values of the rhythm of CSR indicate more irregular CSR investment patterns and lower values indicating more rhythmic investment patterns. In order to be more straightforward, we multiply (–1) to the original value of kurtosis of CSR investment, so that higher values indicate more rhythmic CSR investment patterns.

Institutional distance

We capture the overall institutional difference or distance between China and the host country. We calculate the distance between China and other locations which have firm-level subsidiaries by firstly generating the mean level of all institutional distances of CSR from China and then choose those countries with the distance larger than the mean level as 1, otherwise 0. For those Chinese EM-SOEs who have long institutional distance with host countries, it may be more difficult to exploit their

capabilities. In contrast, those countries with shorter institutional distance with host countries will be more easily to adapt their CSR activities due to the smaller knowledge gap and more similar institutional environments.

International experience

This variable reflects the EM-SOEs' international experience when they make newly-established foreign subsidiaries. The more the subsidiaries a firm establishes in prior years, the higher the probability that this firm has more experience in dealing with international issues when they invest in international markets. We measure the number of EM-SOEs' total number of foreign subsidiaries in the prior year as the indicator of a firm's international experience.

Control variables

We include control variables at different levels. Firstly, we control firm-level variables such as size, age, ROA, debt ratio, intangible and tangible asset ratio, and visibility. Firm size is measured as a natural log converted total amount of assets (Marquis and Qian 2014; Pan et al. 2014; Rodriguez-Fernandez 2016) since larger firms tend to have more resources to invest abroad (Dunning and Lundan 2008). We measure a firm's age as years since Initial Publishing Offering (IPO) year (Dunning and Lundan 2008; Wang, Choi, and Li 2008; Wang and Qian 2011). We also control for firms' Return on Asset (ROA), which is net income divided by the average total asset. We control financial performance because it will impact not only OFDI (Yiu, Lau, and Bruton 2007) but also the firm's tendency to do CSR (Campbell 2007; Clarkson 1995; Mcwilliams and Siegel 2001). Debt ratio measured as total long-term debt to total asset is to reflect companies' leverage and access to outside finance (Seifert, Morris, and Bartkus 2004; Waddock and Graves 1997; Wang and Qian 2011). We also include the ratio of intangible asset (calculated as intangible assets scaled by total assets), which measures the brand strength and R&D

capability (Mcwilliams and Siegel 2000), and fixed asset ratio calculated as fixed assets divided by total assets, which indicates companies' capital intensity (Leuz and Oberholzer-Gee 2006). The ratio of selling, general and administrative expenses is to control companies' level of advertising intensity and visibility (Wang and Qian 2011). Secondly, in order to integrate subnational regional differences, we use the market development level represented by Gross Domestic Product per capita (province' GDP divided by its population) in each province (Marquis and Qian 2014).

All these home-country control variables are added in both the first- and second-stage model of Heckman two-stage model. We lag one period of independent variable against dependent variable in the first stage when predicting companies' likelihood of engaging in CSR activities and also lag one period of independent variable against dependent variable in the second-stage model when analyzing how CSR will affect whether EM-SOEs will enter into host countries with higher CSR requirements. Thirdly, in Heckman second-stage regression equation, we also control host country characteristics such as host-country GDP per capita and level of competition to represent host country market attractiveness (Holburn and Zelner 2010). Finally, in order to eliminate the time-varying and industry-varying effect, we also control the year and industry fixed effects.

Method

Endogeneity tends to be a critical issue in our results. Omitted variables, sample selection bias, or error variance can lead to the problem of endogeneity (Bascle 2008). In our paper, we solve the problem of self-selection bias by using the Heckman two-stage model (Certo, Busenbark, Woo, and Semadeni 2016; Wang et al. 2008; Wang and Qian 2011) in analyzing CSR-location choice relationship and 2sls model as a robustness check to guarantee there is no issue of omitted variables. First, in the Heckman two-stage model, we use a Probit model to estimate the probability of CSR choice. For validity purposes,

Heckman (1979) suggests using an additional variable in the first stage, which strongly predicts the first-stage dependent variable while do not have prediction power in the second-stage dependent variable. We choose here 'industry-level donation' as our control variable since peer-industry-behavior will influence CSR behavior (Galaskiewicz and Burt 1991), but not likely impact the firm's location choice. We then calculate the inverse mills ratio (IMR) from the first-stage probit model and use it into our second stage model. Because our data are embedded into region and industry level, we use multilevel regression method in the second stage to examine the relationship between CSR and location choice, which has been accredited as a valid way to analyze such data structure (Staw, Sandelands, and Dutton 1981; Wang and Qian 2011). In order to control the effect of heterogeneity, we provide our results based on the Huber/White/sandwich robust method after adjusting the within-cluster correlations (Wooldridge 2010). Second, although the Heckman two-stage regression may solve the issue of sample selection bias, it is highly possible that the results still suffer from endogeneity bias caused by unobservable omitted variables (Deng, Kang, and Low 2013). For example, firms with sound products or management teams will go to countries with higher CSR requirements and, at the same time, those firms investing more resources in CSR. We thus provide 2sls regression in estimating whether home-country firms' CSR will affect their entrance into higher CSR-requirement countries after considering the potential issue of endogeneity caused by omitted variables.[21]

[21] We firstly use instrumental variables to predict the estimated CSR value in first stage. We choose city green space ratio, green space per capita, and industry-level CSR as instrumentals because a city that has higher level of green space or green space per capita shows its governments' concern about social welfare and thus likely impact firm's tendency of doing CSR. We find that the chosen instrumental variables are significantly associated with CSR, satisfying relevance requirement of instrumental variables. However, we argue that instrumental variables (green space per capita and industry-level CSR) may not directly impact firm's entrance into host country with higher CSR requirements, complying with exclusion condition of instrumental variables. The empirical test and statistics can be found in table 3-8.

Model specification

We use the model suggested below to test the effect of CSR on investment:

$$
\begin{aligned}
Host\ CSR_{i.t+1} = {} & \beta_0 + \beta_1 CSR_{i,t} + \beta_2 Foreign\ Competition_{i,t} + \beta_3 Foreign\ Competition_{i,t} \\
& + \beta_3 Debt\ Ratio_{i,t} + \beta_4 GDP\ Per\ Capita_{i,t} + \beta_5 Age_{i,t} + \beta_6 ROA_{i,t} + \beta_7 Size_{i,t-1} \\
& + \beta_8 Fixed\ Asset\ Ratio_{i,t} + \beta_9 Intangible\ Asset\ Ratio_{i,t} + \beta_{10} Visibility_{i,t} \\
& + \beta_{11} CSR\ Scope_{i,t} \cdot CSR_{i,t} + \beta_{12} CSR\ Rhythm_{i,t} \cdot CSR_{i,t} \\
& + \beta_{13} Institutional\ Distance_{i,t} \cdot CSR_{i,t} + \beta_{14} International\ Experience_{i,t} \cdot CSR_{i,t} \\
& + \beta_{15} Inverse\ Mills\ Ratio_{i,t} + \sum \beta_j\ Industry\ Dummies \\
& + \sum \beta_k\ Year\ Dummies + \varepsilon_{i,t}
\end{aligned}
$$

Where β_0 is the time-invariant intercept; β_1 to β_{10} are slope coefficients of independent variable and control variables. β_{11} to β_{14} are slope coefficients of moderating effects of CSR scope, CSR rhythm, institutional distance, international experience. β_j and β_k are coefficients of industry and year dummy variables to control for industry fixed effects and changing economic conditions. $\varepsilon_{i,t}$ is the error term.

RESULTS

Table 3-2 shows the host-country CSR requirements by quartiles of home CSR efforts for the full sample, low-level (below-median) CSR sample and high-level (above-median) CSR sample in the home country. In column (7), the average host-country CSR requirements are 5.201 in the full sample, 5.105 in low-CSR firms, and 5.294 in high-CSR firms. We find that the average host country CSR requirements in low-CSR firms are approximately 3.7%[22] lower than those in high-CSR firms, indicating that firms with higher CSR activities in the home country tend to go to host countries with higher CSR requirements. Also, we further calculate the host-country CSR requirements difference

[22] (5.29-5.105)/5.105=3.69%.

between the highest (column (6)) and lowest (column (2)) CSR efforts in full sample, high-CSR sample and low-CSR sample. In column (9), we find that the average differences for the three groups are 0.24 in the full sample[23], 0.032 in the low-CSR sample, and 0.403 in the high-CSR sample. From p-value (column (11)) of three two-sample t-tests, we find that in the low-CSR sample, the host-country CSR requirement in the highest CSR quantile is significantly higher than that in the lowest quantile (0.24 $p < 0.001$) in the full sample. However, in low-CSR sample, this difference is insignificant (0.032 $p > 0.1$). In high-CSR sample, this value becomes significant (0.403 $p < 0.001$). The above results suggest that only for those firms in the high-CSR sample in the home country can they enter host countries with higher CSR requirements while for low-CSR firms in the home country, they cannot.

[Insert Table 3-2 about here]

Table 3-3 displays the descriptive statistics and the correlation matrix. We can observe that firm age, size, ROA, and debt ratio positively correlate with CSR choice. Table 3-5 presents descriptive statistics and correlation matrix for the key variables used in the second-stage Heckman model. Consistent with results in table 3-2, home country CSR investment positively associates with EM-SOEs' location choice of outward foreign direct investment, which complies with our expectation. We also find that ROA, size, intangible asset ratio, and visibility positively correlate with domestic SOEs' CSR location choice, which suggests that firm-level financial factors can help firms enter countries with high CSR requirements. It is also interesting to find that host country GDP Per capita and competition level negatively correlate with their CSR requirements, indicating that economic factors in the host country will, to some extent, hinder the level of CSR requirement. However, there is no significant correlation

[23] This figure is calculated by using the highest home country CSR 5.37 minus the lowest home country CSR 5.13 in full sample. The other two figure in column (9) comply with the same method.

between the home country's GDP Per capita and the level of host country CSR requirement.

In order to guarantee no severe multicollinearity problem in our model, we calculate VIF statistics in both the first- and second-stage model. We found that although there is a significant correlation between some variables, the average VIF is 1.2 in the first-stage regression model and 1.83 in the second-stage regression model, which indicate that no problem of multicollinearity in our results because they are lower than the cut-off value of 10 (Ryan,2008).

[Insert Table 3-3 and 3-5 about here]

First-Stage CSR Choice Estimate

In Table 3-4, we show the results of the first-stage Heckman selection model using the probit regression of the choice of CSR on the factors that are thought to impact whether a firm will engage in CSR investment. CSR dummy is the dependent variable, showing that whether a firm engages in CSR activity. Model (1), the baseline model, shows how firm- and sub-national-level variables impact a firm's CSR choice. It shows that firm size, intangible asset ratio, and debt ratio all positively relate to CSR choice. Besides, we also find that national-level control, GDP per capita, negatively relates to CSR choice. However, we do not find that financial performance, which measured as ROA, positively relates to CSR choice. In model (2), we add industry-level CSR investment as an additional control, which is a valid instrumental variable (Wang and Qian 2011). From the Likelihood Ratio test of model fit, we find that adding industry-level CSR will significantly improve the model explaining power ($P < 0.01$, the incremental χ^2 shown in the bottom of model (2)); thus it is rational to add industry-level CSR investment. In model (3), we further add both industry and year effect, and we find that explaining power further improves significantly compared with the model (2) ($P < 0.01$, the incremental χ^2 shown in the bottom of model (3)). We use the results of the model (3) to generate Inverse Mills Ratio.

[Insert Table 3-4 about here]

Second-stage Location Choice (Host Country CSR Requirement) Estimates

In Table 3-6, we show the results of Heckman second-stage estimation using the inverse Mills ratio as an additional control for self-selection bias. We use a multi-level regression method (Wang and Qian 2011) to analyze the relationship between SOEs' CSR efforts and host country CSR requirements and different moderating effects. From the Likelihood Ratio test, we find consistent results of rejecting the null hypothesis of using Linear model (as shown LR test in the bottom of Table 3-6), which indicates that our dataset is more fitted by using a multi-level model with the region and industry as the different levels of hierarchies.

Model (1) shows the main effect of the level of SOEs' CSR efforts on host country CSR location choice after controlling firm, sub-national, host country, industry and year effects. We find that CSR efforts positively relate with host country CSR requirements at 1% ($P < 0.01$), which shows that CSR efforts will directly help Chinese SOEs offset legitimacy liabilities and go to countries with a higher level of CSR requirements.

In model (2) and (3), we use CSR scope as the moderating variable. We find that in the model (3), the interaction term of CSR scope and CSR is insignificant, which means that the CSR scope does not have a significant moderating effect on our main relationship. We thus fail to support the hypothesis 2a, which states that a broader range of CSR activities hinder the CSR capability development and are less likely to enter host countries with higher CSR requirements.

In model (4) and (5), we show the moderating effect of CSR rhythm on our main relationship. As we argue before, high CSR rhythm shows a more rhythmic pattern of doing CSR, which does not guarantee the efficient CSR learning process. However, a low level of the rhythmic pattern of doing

CSR in a short period may be beneficial to the improvement of CSR capability. As shown in model (5), the main relationship between home CSR efforts and host country CSR requirements is negatively moderated by CSR Rhythm. Thus, we support hypothesis 2b.

In model (6) and (7), we use the institutional distance between China and the host country as the moderating variable on the main relationship between home-country-CSR efforts and host-country-CSR requirements. We find that the institutional distance negatively moderates the relationship between home country CSR efforts on host country CSR requirements, indicating that CSR experience developed at home are less useful when SOEs enter the host country with more significant institutional distance. Therefore, we support hypothesis 3a, which states from the legitimacy challenge perspective instead of hypothesis 3b from the springboard view.

Finally, model (8) and (9) test the moderating effect of international experience on home country CSR efforts–host country CSR requirements relationship. We find that international experience positively moderates the relationship between home CSR efforts and host country CSR requirements, suggesting that international experience helps a firm obtain international experience, include but not limited to CSR experience, which finally promotes their probability of entrance into higher-CSR requirement countries. We thus support hypothesis 4a, which predicts from legitimacy challenge view and reject hypothesis 4b, which states from the springboard perspective. The above three moderating effects can be visualized from figure 3-1 to figure 3-3.

[Insert Table 3-6 about here]

[Insert Figure 3-1, 3-2, and 3-3 about here]

Robustness Check

In order to keep our results robust under different models, we run several additional regressions to

access the robustness of our results. We test our main relationship under the OLS model with the robust standard error. We find the same results in OLS as in the hierarchical model. Given that the firm's CSR decision may be endogenous, we further run our data under 2sls model, including the direct and all moderating effects, the main results are roughly identical to the results found in the hierarchical regression equation. Therefore, after considering the potential endogeneity problems by using instrumental variables, we can still get the same results.

[Insert Table 3-7 about here]

DISCUSSION

This study investigated the relationship between CSR activities at home and EM-SOEs' foreign location choice. Our results show that through engaging in CSR activities at home, EM-SOEs can develop their CSR experience, which equips them to overcome the higher CSR barriers in the host country. We find that, under the same extent of CSR efforts, firms can develop stronger CSR experience when they engage in CSR activities in a dynamic rather than a regular manner, which helps them deal with higher CSR requirements from the host country. We also proposed that the relationship between the CSR efforts at home and the entry of host countries with higher CSR requirements becomes strengthened if firms focus on a few dimensions of CSR when they engage in CSR activities at home instead of dispersing efforts among many dimensions. However, we could not find a significant moderating effect to support this hypothesis. One potential reason is that it is still an early stage for Chinese firms getting involved with CSR activities; the average number of dimensions of CSR engagements is relatively low. Our findings also show that EM-SOEs can better utilize home-developed CSR experience in internationalization if they possess stronger international experience; in contrast, the effect of CSR experience developed back at home may be constrained when EM-SOEs tend to enter the

host country with more significant institutional distance.

In general, our findings extend the literature on the legitimacy effect of CSR in internationalization. In particular, we contribute to CSR capability and emerging market literature. We explain our key findings and contributions in more detail in the following.

First, we go beyond previous literature on CSR legitimacy effect at the host country by arguing that firms need to ensure their CSR activities to meet or even exceed the expectations of the local stakeholders in order to achieve legitimacy. In this situation, EM-SOEs need to possess a certain level of CSR capability before they enter into the international market. Based on the dynamic capability perspective, we identify two aspects of CSR experience, namely managerial attention and awareness, and organizational experience in dealing with expectations of stakeholders. Through conducting CSR activities at home, EM-SOEs can develop their CSR experience, which helps them overcome the CSR barriers of the host country.

Second, previous studies have already identified the importance of overcoming the market-based barriers of the host country (Eden and Miller, 2004; Hymer, 1960/1976; Zaheer, 2002). However, fewer studies have emphasized the social and environmental barriers in the host country and correspondingly the way to overcome these non-market barriers. Our study specifies the different levels of CSR experience by engaging in CSR activities at home with different patterns, which helps firms to deal with social and environmental requirements with different levels in the host country.

Thirdly, we further develop a CSR capability concept in an international context by specifying the conditions when firms can better utilize the home-developed CSR experience in the different institutional contexts. We extend the prior literature on the market-based knowledge transfer between different countries (Delios and Beamish, 2001; Madhok, 1997) to the social-oriented knowledge and

capability across borders. The constraining effect of the home-developed CSR experience at the host country with more significant distance can corroborate the path-dependence nature of the CSR capability (Hart, 1995; Hart and Dowell, 2011).

Practical implications

Our findings suggest that managers should be aware of the importance of developing CSR experience before they enter into international markets. Even though nowadays people have noticed the importance of being socially responsible, they may lack the ability to identify and understand the different requirements and expectations in different institutional environments. Our research also provides suggestions for managers on how more efficiently develop CSR capability and utilize such home-developed capabilities in the international context. Our results suggest managers should pay particular attention to the institutional policies at the host country, that they cannot directly copy their home CSR practices, as the CSR requirements and policies may be mostly different when they try to enter into the host country with different institutional environment.

Limitations and future research

We also notice several limitations in our research that present future research opportunities. First, while we argue the EM-SOEs can develop CSR experience at home through engaging CSR activities in terms of managerial awareness and organizational capabilities in meeting stakeholder needs, we do not directly measure and assess CSR experience in these two aspects. Future studies may utilize a survey to directly test whether engaging CSR at home can help firms develop their CSR experience. Second, we examine the general CSR requirement from the host country stakeholders as the barriers to enter into the host market. Future research can focus on different specific social and environmental standards.

Thirdly, even though our study focuses on EM-SOEs, we believe our arguments can also apply to

other types of firms. The importance of social and environmental requirements from the host country has been increasing, so that MNEs from western countries also need to develop their CSR experience because of the localization nature of CSR (Husted, Montiel, and Christmann, 2016). Future studies can apply our arguments in different contexts in order to find out whether our arguments can be generalized.

Table 3-1: FDI Destinations of Sample Firms in the Period of 2010-2016

location	Number	location	number	location	Number	Location	Number
ARE	19	GAB	2	MUS	1	USA	133
AUS	58	GBR	27	MYS	26	VEN	3
BEL	7	GHA	4	NGA	2	VNM	9
BGD	1	HUN	1	NIC	1	ZAF	17
BGR	1	IDN	28	NLD	21		
BLR	2	IND	26	NOR	1		
BOL	3	IRL	3	NZL	13		
BRA	23	ISR	4	PAK	3		
CAN	37	ITA	14	PAN	17		
CHE	5	JPN	32	PHL	2		
CHL	3	KAZ	4	PNG	2		
CHN	1	KEN	3	POL	8		
CIV	3	KGZ	1	RUS	25		
CMR	2	KHM	7	SAU	3		
COD	4	KOR	11	SGP	121		
COG	1	LAO	11	SLE	1		
CZE	3	LBR	2	SVN	3		
DEU	41	LKA	1	TGO	2		
DNK	1	LTU	1	THA	23		
ECU	1	LUX	12	TJK	1		
EGY	2	MEX	7	TTO	1		
ESP	4	MLT	6	TUR	8		
ETH	1	MMR	11	TZA	4		
FRA	29	MNG	4	URY	1	Total	926

Note: The observation period is 2010-2016.

Table 3-2: Host-Country CSR Requirements and Home-Country CSR Activities

	N	Low	Median Low	Median	Median High	High	Average CSR in home and host country	Home country CSR spread (6)-(2)	Host country CSR spread (6)-(2)	Two sample T-test (t-stats)	p-value
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
All firms home country CSR	548	27.14	32.31	39.85	46.83	66.42	42.51	39.280		-23.824***	0.000
Host CSR requirements		5.130	5.075	5.247	5.181	5.370	5.201		0.240	-3.811***	0.000
Firms with below-median CSR	281	24.39	27.90	31.48	33.05	37.24	30.81	12.857		-22.963***	0.000
Host CSR requirements		5.004	5.125	5.222	5.141	5.035	5.105		0.032	-0.330	0.742
Firms with above-median CSR	267	40.04	43.02	47.66	57.38	74.07	52.49	34.036		-26.822***	0.000
Host CSR requirements		5.002	5.412	5.314	5.339	5.404	5.294		0.403	-4.248***	0.000

Note: This table reports the average difference of host country CSR requirements for all home firms, home firms with above-median CSR activities, and below-median CSR activities. The observations are sorted into five classes according to home-country firms' CSR activities (2 = Low, 6 = High). "Host country CSR spread (6)-(2)" is the host country CSR difference between home country best-CSR firms (6 High) and home country worst-CSR firms (2 Low) in each group (all home country firms, home country firms with above and below-median CSR). "Home country CSR spread (6)-(2)" is the home country CSR difference between home best-CSR firms and home worst-CSR firms in each group (all home country firms, home country firms with above and below-median CSR).Significance level: † $p<0.1$, * $p<0.05$, ** $p<0.01$, *** $p<0.001$

Table 3-3: Descriptive Statistics of Heckman First-Stage Predictors

	mean	sd	1	2	3	4	5	6	7	8	9
CSR Dummy	0.5023	0.5003									
Debt ratio	0.0797	0.1024	0.1749*								
Age	11.3021	5.1432	-0.2689*	-0.0662							
ROA	0.0516	0.0515	0.1077*	-0.1028*	-0.2933*						
Size	23.4899	1.4798	0.3046*	0.1998*	-0.2310*	0.0455					
Fixed asset ratio	0.2461	0.1705	0.007	0.5482*	-0.0508	-0.1473*	0.1814*				
Intangible asset ratio	0.0442	0.0572	0.0949*	0.1930*	0.0455	-0.0841*	0.0768*	0.0446			
Visibility	0.0420	0.0470	-0.0381	-0.3180*	0.037	0.0645	-0.1926*	-0.1777*	-0.0541		
GDP per capita	10.9546	0.4735	-0.1480*	-0.044	0.0512	-0.1391*	0.2246*	-0.0142	-0.0643	-0.0758*	
Industry level of CSR	40.8858	8.2910	0.0365	0.1069*	-0.1212*	-0.0055	0.4775*	0.1525*	0.2745*	-0.1443*	0.1637*

Note: The dependent variable is measured in year t, the independent variable, in t-1. *indicates correlation significance level at 5%.

Table 3-4: Probit Estimates for Heckman First-Stage Model: CSR Choice Regressed on Firm, National Variables, with Industry and Year Effects

CSR Dummy	M1	M2	M3
Debt ratio$_{t-1}$	2.703**	2.538**	1.041
	(4.57)	(4.28)	(1.32)
Age $_{t-1}$	-0.055**	-0.060**	-0.045**
	(-5.52)	(-5.86)	(-3.82)
ROA $_{t-1}$	0.011	-0.075	-0.764
	(0.01)	(-0.08)	(-0.72)
Size $_{t-1}$	0.319**	0.386**	0.451**
	(8.32)	(9.16)	(9.44)
Fixed asset ratio $_{t-1}$	-1.460**	-1.282**	-1.532**
	(-4.40)	(-3.85)	(-3.75)
Intangible asset ratio $_{t-1}$	1.800*	2.820**	2.044*
	(1.68)	(2.60)	(1.71)
Visibility $_{t-1}$	1.320	1.017	1.078
	(1.27)	(0.96)	(0.88)
GDP per capita $_{t-1}$	-0.598**	-0.578**	-0.301**
	(-5.84)	(-5.59)	(-2.37)
Industry-level of CSR $_{t-1}$		-0.028**	-0.006
		(-4.05)	(-0.55)
Industry Fixed Effects	No	Yes	Yes
Year Fixed Effects	No	No	Yes
Intercept	-0.294	-0.948	-4.955**
	(-0.24)	(-0.75)	(-2.90)
N	864	864	864
Pseudo R2	0.166	0.180	0.264
Log likelihood	-499.161	-490.811	-440.732
LR chi2(22)	199.419	216.117	316.277
Incremental χ^2 of (2) to (1)		16.699***	
Incremental χ^2 of (3) to (2)			100.159***

Note: CSR choice was measured for year t; firm, subnational, and industry level predictors, for year t - 1. Significance level: † p<0.1, * p<0.05, ** p<0.01, *** p<0.001;

Table 3-5: Descriptive Statistics of Heckman Second-Stage Predictors

	mean	sd	1	2	3	4	5	6	7	8	9	10
Location Choice	5.230	0.501										
CSR	41.613	15.197	0.230*									
Debt ratio	0.078	0.098	-0.054*	0.003								
GDP per capita	11.033	0.447	0.028	0.382*	-0.065*							
Age	12.086	5.259	-0.030	-0.125*	-0.087*	0.058*						
ROA	0.036	0.074	0.156*	-0.006	-0.059*	-0.070*	-0.305*					
Size	23.589	1.478	0.110*	0.579*	0.232*	0.199*	-0.235*	0.203*				
Fixed asset ratio	0.236	0.165	-0.012	0.086*	0.514*	-0.017	-0.013	-0.203*	0.120*			
Intangible asset ratio	0.046	0.059	0.081*	0.173*	0.204*	-0.067*	0.035	0.019	0.042	0.053		
Visibility	0.045	0.058	0.100*	-0.047	-0.259*	-0.034	0.082*	0.051	-0.147*	-0.146*	-0.056*	
Host GDP Per Capita	8.725	1.926	-0.069*	-0.079*	-0.062*	-0.003	0.076*	0.035	-0.022	0.001	-0.057*	0.107*
Host Competition	4.844	0.744	-0.141*	0.049 0	0.107*	0.082*	0.075*	-0.146*	0.050	0.080*	0.008	-0.009
Inverse Mills Ratio	0.869	0.541	-0.018	-0.013	-0.280*	0.243*	0.487*	-0.274*	-0.574*	-0.052	-0.147*	0.103*
Number of Subsidiaries	8.150	7.407	-0.053	0.045	0.122*	0.327*	0.020	-0.286*	0.064*	0.140*	-0.048	-0.060*
Institutional Distance	0.672	0.470	-0.047	-0.102*	0.136*	-0.049	0.012	-0.044	-0.017	0.046	0.019	0.050
CSR Rhythm	-1.355	1.815	0.247*	0.262*	-0.291*	0.049	0.049	0.186*	-0.160*	-0.121*	0.077*	0.221*
CSR Scope	0.578	0.494	0.140*	0.317*	-0.315*	0.037	0.029	-0.015	-0.162*	-0.182*	0.169*	-0.001

	mean	sd	11	12	13	14	15	16
Host GDP Per Capita	8.725	1.926						
Host Competition	4.844	0.744	0.278*					
Inverse Mills Ratio	0.869	0.541	0.118*	0.079*				
Number of Subsidiaries	8.150	7.407	-0.086*	0.109*	-0.043			
Institutional Distance	0.672	0.470	0.376*	0.529*	0.025	0.026		
CSR Rhythm	-1.355	1.815	0.207*	0.000	0.372*	-0.320*	0.014	
CSR Scope	0.578	0.494	0.064*	-0.018	0.266*	-0.127*	-0.034	0.358*

Note: Host country CSR was measured in year t+1; firm, sub-national, and industry-level predictors, in year t. *indicates correlation significance level at 5%.

Table 3-6: Estimates of Heckman Second-Stage Model

Multi-level Regression of Host country CSR requirements on Predicted CSR, Firm, Industry, Subnational-Level Controls

DV: Host country CSR	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
CSR_{t+1}	0.0067**	0.0055*	0.0083***	0.0060*	0.0026	0.0068**	0.0106***	0.0069***	-0.0023
	(2.83)	(2.35)	(4.04)	(2.14)	(0.65)	(3.01)	(3.94)	(3.57)	(-0.76)
Firm, subnational-level Control Variables:									
Debt ratio $_t$	0.3447	0.3946	0.4123	0.5505	0.5972†	0.2812	0.2896	0.3048	0.3774
	(0.91)	(0.98)	(1.16)	(1.49)	(1.80)	(0.71)	(0.74)	(0.79)	(1.04)
GDP per capita $_t$	-0.0531	0.0007	0.0079	0.0009	-0.0128	-0.0026	0.0049	-0.0428	-0.0559
	(-0.75)	(0.01)	(0.10)	(0.01)	(-0.18)	(-0.04)	(0.07)	(-0.45)	(-0.69)
Age $_t$	-0.0039	0.0021	0.002	-0.0016	0.0003	0.0008	0.0003	0.0021	0.0021
	(-0.54)	(0.29)	(0.28)	(-0.23)	(0.04)	(0.13)	(0.05)	(0.34)	(0.33)
ROA $_t$	0.8749**	0.9015**	0.9921**	0.5987†	1.2614***	0.8383**	0.7776*	0.8445***	1.0428***
	(2.92)	(2.58)	(3.03)	(1.89)	(5.30)	(2.86)	(2.43)	(3.53)	(3.44)
Size $_t$	0.0102	-0.0448	-0.0467	-0.033	-0.028	-0.0434	-0.0435	-0.0424	-0.0125
	(0.60)	(-1.21)	(-1.16)	(-0.89)	(-0.74)	(-1.15)	(-1.16)	(-1.11)	(-0.32)
Fixed asset ratio $_t$	0.1736	0.3159†	0.3228	0.1901	0.128	0.3327†	0.3292†	0.3879*	0.3457*
	(1.04)	(1.78)	(1.62)	(1.21)	(0.81)	(1.87)	(1.90)	(2.29)	(2.09)
Intangible asset ratio $_t$	-0.0358	-0.3883	-0.216	-0.3277	-0.29	-0.19	-0.26	-0.2169	-0.3376
	(-0.09)	(-0.89)	(-0.45)	(-0.80)	(-0.64)	(-0.45)	(-0.59)	(-0.54)	(-0.84)
Visibility $_t$	0.2886	0.2303	0.226	-0.0467	-0.138	0.0978	0.1688	0.2004	0.215
	(0.67)	(0.54)	(0.53)	(-0.10)	(-0.33)	(0.22)	(0.37)	(0.51)	(0.57)
Host Country Control Variables:									
Foreign Competition $_t$	-0.0569†	-0.0555†	-0.0561†	-0.0594†	-0.0569	-0.0826†	-0.0970*	-0.0599*	-0.0463
	(-1.88)	(-1.85)	(-1.83)	(-1.84)	(-1.63)	(-1.85)	(-2.27)	(-2.13)	(-1.44)
Foreign GDP Per Capita $_t$	-0.0349	-0.0338	-0.0333	-0.0354	-0.0378†	-0.039	-0.0397	-0.0318	-0.0321
	(-1.48)	(-1.46)	(-1.40)	(-1.58)	(-1.70)	(-1.55)	(-1.64)	(-1.35)	(-1.29)
Inverse Mills Ratio $_t$		0.0841***	0.3193*						
		(3.57)	(2.00)						

CSR Scope $_t$		-0.2442*	-0.2428*	-0.2044*	-0.1422	-0.2242*	-0.2168*	-0.1864†	-0.1307
		(-2.45)	(-2.46)	(-1.96)	(-1.35)	(-2.26)	(-2.06)	(-1.72)	(-1.09)
CSR Scope $_t$ *CSR $_t$			-0.0054						
			(-1.25)						
CSR Rhythm $_t$				0.0706**	0.1630**				
				(3.03)	(2.70)				
CSR Rhythm $_t$ *CSR $_t$					-0.0027*				
					(-2.06)				
Institutional Distance $_t$						0.0803†	0.3365***		
						(1.71)	(3.31)		
Institutional Distance $_t$ *CSR $_t$							-0.0057**		
							(-2.65)		
International Experience $_t$								0.0092†	-0.0381*
								(1.65)	(-2.35)
International Experience $_t$ *CSR $_t$									0.0011**
									(2.70)
Intercept	5.1901***	5.8705***	5.7149***	5.7050***	5.8984***	5.9651***	5.7617***	6.1932***	6.0653***
	(4.63)	(4.53)	(4.24)	(4.64)	(4.88)	(4.55)	(4.44)	(4.32)	(5.22)
N	525	525	525	525	525	525	525	525	525
Log Likelihood	-312.03	-309.89	-308.50	-305.39	-303.18	-310.12	-308.09	-309.40	-299.20
LR test (Multilevel vs. Linear)	30.59***	33.17***	33.78***	12.43**	10.39**	29.24***	29.81***	32.65***	31.74***

Note: t statistics using robust standard error provided in parentheses. The level of host country's CSR requirement was measured for year t+1; firm, sub-national, and industry-level predictors, for year t. Significance level: † p<0.1, * p<0.05, ** p<0.01, *** p<0.001

Robustness Check: Two-stage Ordinary Least Square (2sls)

Table 3-7: 2sls Regressions of Host country CSR requirements on Predicted CSR, Firm, Industry, Subnational-Level Controls

	OLS		2sls									
	(1)	(2)	1st Stage	2nd Stage	1st Stage	2nd Stage	1st Stage	2nd Stage	Moderating effects			
			(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
CSR measurement:												
CSR_t	0.0083***	0.0083***										
	(3.79)	(3.71)										
Predicted $CSR1_t$				0.0203**								
				(3.10)								
Predicted $CSR2_t$						0.0198**						
						(3.17)						
Predicted $CSR3_t$								0.0212***	0.0146*	0.0201**	0.0275***	0.0097
								(3.37)	(2.11)	(2.84)	(3.93)	(1.51)
Instrumental Variables:												
City Green Area $Ratio_t$			-0.3052*				-0.2571+					
			(-2.197)				(-1.799)					
City Green Space Per $capita_t$					-0.1286+		-0.0988					
					(-1.895)		(-1.418)					
Industry Adjusted CSR_t			0.6659***		0.6806***		0.6874***					
			(8.65)		(8.67)		(8.77)					
Host Country Variables:												
Foreign $Competition_t$	-0.0693*	-0.0693*		-0.0697+		-0.0686+		-0.0683+	-0.0694+	-0.0680+	-0.1148**	-0.0543+
	(-1.997)	(-1.995)		(-1.958)		(-1.941)		(-1.930)	(-1.937)	(-1.910)	(-2.598)	(-1.699)
Host Country GDP per $capita_t$	-0.0268+	-0.0269+		-0.0319*		-0.0323*		-0.0321*	-0.0325*	-0.0310*	-0.0398*	-0.0331*
	(-1.896)	(-1.891)		(-2.216)		(-2.235)		(-2.232)	(-2.267)	(-2.183)	(-2.464)	(-2.404)
Firm-level Control Variables:												

ROA_t	0.9684**	0.9692**	-18.9080*	1.2361**	-16.0165*	1.2318**	-17.4791*	1.2625***	1.2367**	1.2884**	1.1404**	1.3301***
	(2.74)	(2.75)	(-2.519)	(3.25)	(-2.124)	(3.28)	(-2.310)	(3.34)	(3.21)	(3.14)	(3.01)	(3.51)
Debt $Ratio_t$	0.4338	0.4342	-13.5500*	0.6539*	-14.8612**	0.6321*	-14.1059*	0.6611*	0.7108*	0.7507*	0.6454*	0.6536*
	(1.36)	(1.37)	(-2.420)	(2.12)	(-2.652)	(2.05)	(-2.516)	(2.16)	(2.32)	(2.30)	(2.09)	(2.15)
GDP $Per\ Capita_t$	-0.0504	-0.0513	1.5778	-0.0765	1.3453	-0.0751	1.3555	-0.0785	-0.0853	-0.0812	-0.0672	-0.0992
	(-0.798)	(-0.719)	(1.40)	(-1.164)	(1.18)	(-1.151)	(1.19)	(-1.198)	(-1.303)	(-1.251)	(-1.032)	(-1.541)
Age_t	-0.0025	-0.0026	-0.3064**	0.0012	-0.3041**	0.001	-0.3111**	0.0015	0.0007	0.0017	0.0011	0.0058
	(-0.423)	(-0.355)	(-2.934)	(0.19)	(-2.909)	(0.17)	(-2.980)	(0.24)	(0.10)	(0.28)	(0.19)	(0.94)
$Size_t$	0.0052	0.0064	3.8051***	-0.0641	3.8661***	-0.0607	3.7918***	-0.0691	-0.0613	-0.068	-0.0702	-0.0635
	(0.20)	(0.14)	(8.53)	(-1.469)	(8.69)	(-1.442)	(8.51)	(-1.630)	(-1.425)	(-1.605)	(-1.635)	(-1.512)
Fixed Asset $Ratio_t$	0.2566	0.2532	-8.7359**	0.3065	-7.9407*	0.3098	-8.6059**	0.3146	0.3274	0.3111	0.3139	0.3750+
	(1.40)	(1.10)	(-2.687)	(1.55)	(-2.455)	(1.59)	(-2.649)	(1.59)	(1.63)	(1.57)	(1.59)	(1.87)
Intangible $Asset_t$	0.1493	0.1518	24.7069**	-0.313	23.9772**	-0.2905	24.8828***	-0.3429	-0.3228	-0.4543	-0.3469	-0.4342
	(0.39)	(0.37)	(3.29)	(-0.696)	(3.20)	(-0.657)	(3.32)	(-0.769)	(-0.718)	(-0.997)	(-0.799)	(-1.061)
Advertising $Intensity_t$	0.2033	0.2061	28.9557**	-0.0864	24.3304*	-0.0622	27.4531**	-0.1019	-0.1865	-0.0286	-0.0948	-0.2701
	(0.43)	(0.41)	(2.91)	(-0.174)	(2.46)	(-0.123)	(2.74)	(-0.201)	(-0.383)	(-0.055)	(-0.192)	(-0.587)
IMR_t		0.0051										
		(0.03)										
CSR3 $Rhythm_t$									0.1712*			
									(2.02)			
CSR3 $Rhythm_t$ *CSR3 $_t$									-0.0036*			
									(-1.968)			
CSR $Scope_t$										-0.0229		
										(-0.110)		
CSR $Scope_t$ *CSR3 $_t$										0.0017		
										(0.39)		
Institutional $Distance_t$											0.4867**	
											(2.65)	
CSR3 $_t$ *Institutional $Distance_t$											-0.0091*	

											(-2.375)	
International experience $_t$												-0.0663***
												(-4.119)
CSR3 $_t$ *International experience $_t$												0.0017***
												(5.22)
Intercept	5.2328***	5.2160***	-91.5424***	6.6530***	-91.3193***	6.5738***	-87.6186***	6.7452***	6.9107***	6.7825***	6.5456***	7.3384***
	(5.86)	(5.21)	(-6.161)	(5.73)	(-6.091)	(5.82)	(-5.803)	(5.94)	(5.99)	(6.08)	(5.87)	(6.65)
N	525	525	548	525	548	525	548	525	525	525	525	525
R Square	0.26	0.26	0.65	0.25	0.65	0.25	0.65	0.26	0.26	0.26	0.27	0.3
Log likelihood	-326.48	-326.48	-1978.88	-328.5	-1979.52	-328.93	-1977.82	-327.79	-324.67	-327.12	-323.82	-310.7
Weak identification test (Cragg-Donald Wald F statistic):			38.323 (P<0.01)		37.622 (P<0.01)		26.269 (P<0.01)					
Sargan statistic (overidentification test of all instruments):				3.280 P>0.05		1.777 P>0.05		3.981 P>0.05				
Endogeneity test of endogenous regressors:				4.336 P<0.05		3.527 P<0.1		5.123 P<0.05				

Note: t statistics using robust standard error provided in parentheses. The level of host country's CSR requirements was measured for year t+1; firm, subnational, and industry level predictors, for year t. Significance level: † p<0.1, * p<0.05, ** p<0.01, *** p<0.001

The dependent variable in models (1), (2), (4), (6), (8), (9), (10), (11), and (12) is host country CSR requirements. Model (1) and model (2) use OLS regression to predict CSR-host country CSR requirement relationship. From the endogeneity test in the model (4), (6), and (8), the p-value is smaller than 0.05 in each of three models, indicating that our independent variable CSR is endogenous. To explicitly address these potential endogeneity problems, we perform 2sls regression analyses using industry-level CSR score, subnational percentage of green space and green space per capita as instrumental variables. The above instrumentals may impact a firm's CSR behavior while rarely impacts a firm's internationalization, satisfying the exclusion condition of instruments. From the Cragg-Donald (1993) instrument relevance test, the p-value is less than 0.001, rejecting the null hypothesis that the instruments are weak. From Sargan (1958) overidentification test, the exogeneity of the instrumental variables is confirmed in each of the above three models (i.e., accept the null hypothesis of no significant correlations between the instrumental variables and the error terms in the host country CSR requirements regressions). Thus, we believe that these instrumental variables are valid. The dependent variable in models (3), (5) and (7) is adjusted CSR, a predicted variable from first-stage regression. It is estimated as the function of several instrumental variables, firm, industry, subnational-level controls and year dummy. Using the predicted value of CSR as the adjusted independent variable in each of the above three models, we find a significant relationship between CSR and host country CSR requirements in the model (4), (6), and (8). We further exam moderating effects of CSR scope, Rhythm,

institutional distance, and international experience base on the predicted value of CSR in model (7) (the largest Loglikelihood in model (7) indicates the best model fit) from model (9) to model (12), we find that CSR scope and CSR Rhythm do not have significant moderating effects. In contrast, international experience and institutional distance have significant moderating effects.

Figure 3-1: Theoretical Framework

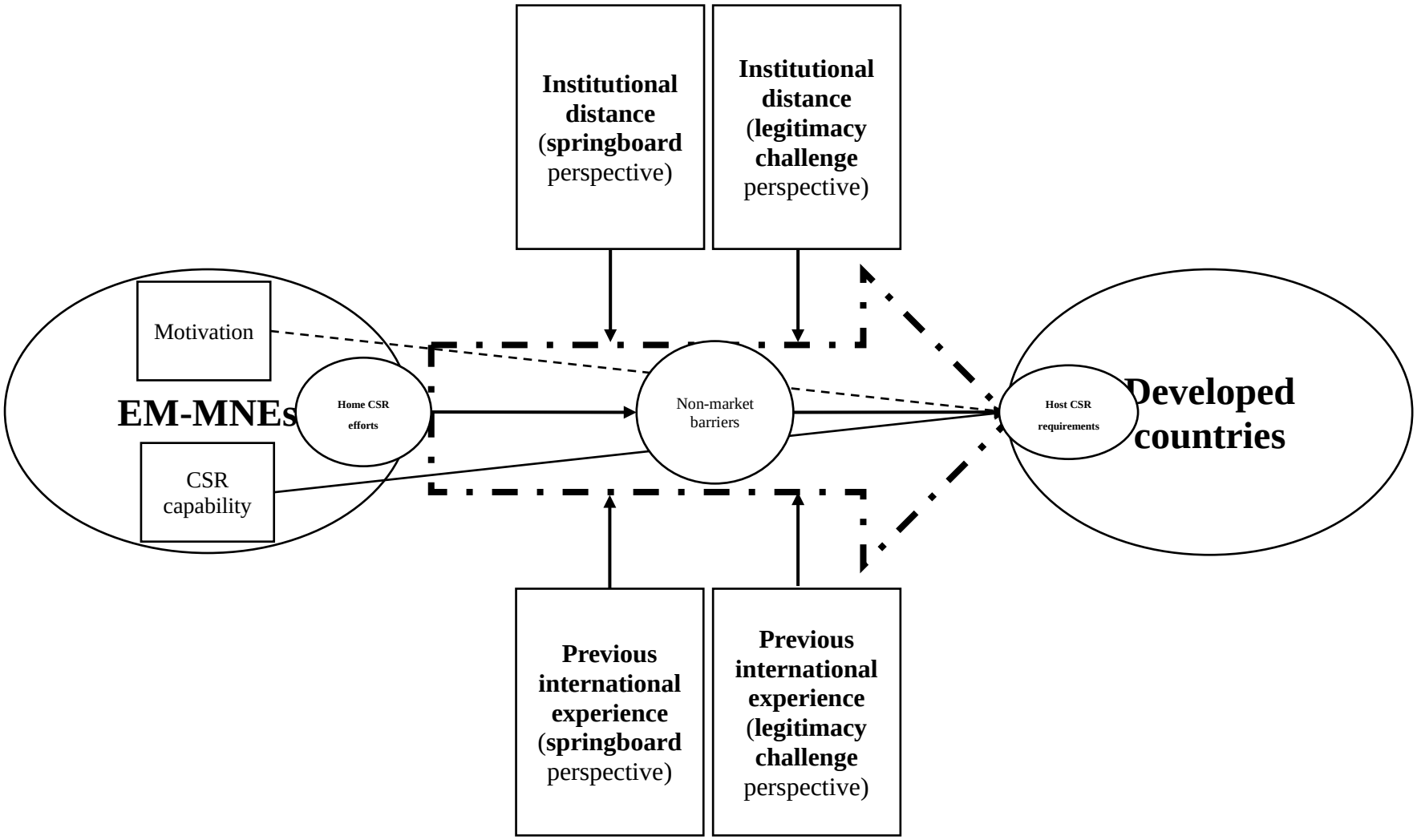


Figure 3-2: Interaction Effect of CSR and CSR Rhythm on Location Choice

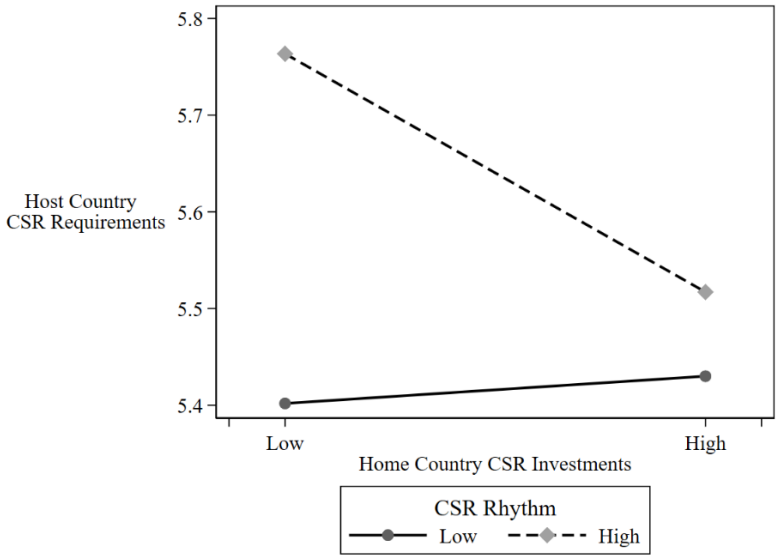


Figure 3-3: Interaction Effect of CSR and Institutional Distance on Location Choice

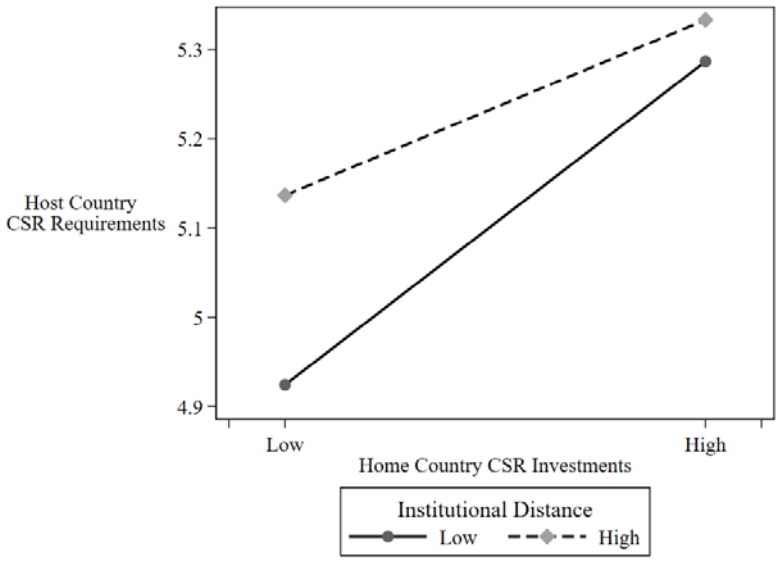
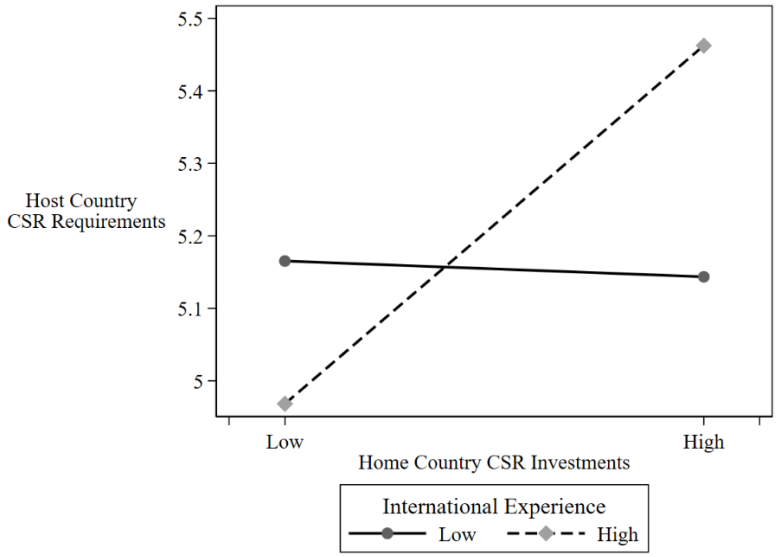


Figure 3-4: Interaction Effect of CSR and International Experience on Location Choice



Appendix Table 3-1: Variables Description

Variables	Description	Resource
Dependent Variable: Host country CSR requirement	The average value of three items from SSI database	http://www.ssfindex.com/
Independent Variable: Level of CSR investment	The score of CSR investment	Rankins CSR Rating (RKS) database
Instrumental variables:		
Industry-level CSR	Arithmetic Mean of CSR within each industry in each year	CSMAR
City Green Space Ratio	The ratio of Greenspace of a province	China Statistic Year Book
City Green Space Per Capita	The total area of Greenspace scaled by province population	China Statistic Year Book
Moderating Variables:	Dummy: Higher than industry-year mean coded as 1, otherwise 0.	CSMAR
CSR Scope		
CSR Rhythm	Kurtosis*(-1)	CSMAR
Institutional Distance	Dummy: Higher than the mean level of Institutional distance coded as 1, otherwise 0.	Global Competitiveness Index (GCI) Dataset database
International Experience	Number of foreign subsidiaries in prior years	Firm's Annual Report
Control Variables:		
Size	Natural Log of firm's total asset	CSMAR
Age	Observation year-IPO year	CSMAR
ROA	Net income divided by total asset	CSMAR
Intangible ratio	Intangible asset /total assets	CSMAR
Tangible asset	Tangible asset/total assets	CSMAR
Visibility	Selling expense/ total revenue	CSMAR
Debt ratio	Long term debt/ total assets	CSMAR
Industry-level of CSR	The mean level of CSR within each industry	CSMAR
Home country GDP Per Capita	Regional GDP divided by total regional population	WIND
Host country GDP Per Capita	Host Country GDP divided by the total population	Global Competitiveness Index (GCI) Dataset database
Host country competitiveness	The Global Competitiveness report	Global Competitiveness Index (GCI) Dataset database

CONCLUSION

Based on publicly listed firms in the Chinese market over the past decade, we find the impact of firms' CSR activities on firms' financial performance, investment, and their foreign location portfolio. First, we take a capability-development perspective on CP–CFP relationship and demonstrate that CP–CFP relationship changes from negative to positive as firms move from the development stage to maturity. This result helps us reconcile previous literature in terms of how CP impacts on CFP: the relationship between CP and CFP is not merely positive or negative or even curve-linear, but it changes from negative to positive as firms move from the development stage to mature stage. Therefore, disentangling CP–CFP relationship within life-cycle stages not only help us reconcile the CP-CFP debate in previous literature but also incorporate the concept of resource-utilizing capability in firms' socially responsible activities. Second, taking an integrated information asymmetry and stakeholder perspective, we release the assumption of investment–cash flow sensitivity by inducing a social-acceptance view into corporate investment literature. Facing competitive pressures from other bidders, whether a firm can build a trustful relationship with stakeholders who hold investment opportunities, will be of much importance in improving their investment expenditure. We not only find a positive relationship between CSR and investment but also uncover the black box of this relationship through finding a mediating effect of investment opportunities. To this end, we enrich the previous corporate investment literature by taking into consideration the CSR and switch the research focus from investors to investment targets who hold investment opportunities. Third, to investigate factors that may impact firms' internationalization location choice portfolio, we believe that non-market barriers constitute another aspect that hinders the home firms' entrance into the host country with high social requirements. We regard that firms' CSR as a critical aspect of non-market strategy that will help home country's firms develop a non-market capability that is essential to overcome such barriers and increase their possibility of entering the country with a high social requirement. With the increasing level of CSR experience developed in the home country, home country firms are more likely to identify, meet, and exceed the host country stakeholders' needs, which promote their likelihood of entrance into countries with a high social requirement. We induce the CSR into internationalization entrance literature through switching the research focus from the host country to the home country. Our research makes a timely

contribution to both international business and CSR.

In sum, we use CSR as an angle to investigate firm-level outcomes such as firm financial performance, investment expenditure, and foreign market entrance. We support the argument that CSR can mostly help firms build social legitimacy in the eyes of stakeholders both in the home country and the host country. Thus, firms may use CSR to build legitimacy in the home country and get critical resources that are of paramount importance for their development. Besides, how to deal with multiple institutional logics and understand different stakeholders' expectations at a specific time point in the host country are becoming the central challenges for MNEs' managers. Through developing CSR experience in the home country, we extend CSR activities to the host country and explain how MNEs' managers deal with the pressure from diversified international stakeholders' expectations through developing CSR experience in the home country. We use CSR as a vehicle to explain the stakeholder-firm relationship in both home and host countries by focusing on how firms engage in CSR. By extending CSR as a learning process or a capability that has a "path-dependent" characteristic, we believe that our research makes a timely contribution to previous literature and has important implications for future research.

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